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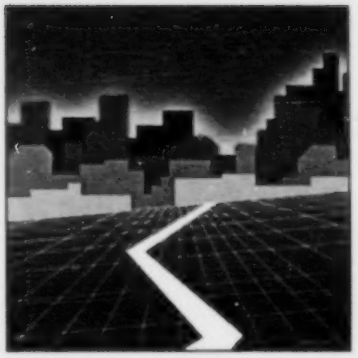
Analytical Paper

Trends and Conditions in Census Metropolitan Areas

Labour Markets, Business Activity, and Population Growth and Mobility in Canadian CMAs



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Trends and Conditions in Census Metropolitan Areas

This series of reports provides key background information on the trends and conditions in Canadian Census Metropolitan Areas (CMAs) across a number of dimensions. Subjects covered include demographics, housing, immigration, aboriginal persons, low income, economic conditions, health, location of work and commuting mode, and culture.

The objective of these reports is to provide statistical measures of trends and conditions in our larger metropolitan areas, and neighbourhoods within them. These measures will be available for use in city planning and in policy assessments of what works to create a healthy city.

Statistics Canada has worked on this project in collaboration with the Cities Secretariat, Infrastructure Canada (formerly Cities Secretariat of the Privy Council Office), with financial assistance from 14 other departments.

This project is being conducted under the direction of Doug Norris and Garnett Picot at Statistics Canada.

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Statistics Canada
Business and Labour Market Analysis Division
Science, Innovation and Electronic Information Division

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Labour Markets, Business Activity, and Population Growth and Mobility in Canadian CMAs

Andrew Heisz, Sébastien LaRochelle-Côté, Michael Bordt and Sudip Das

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Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

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Executive summary

Cities are the engines of Canada's economy. They are where the majority of the population lives, where the most employment is located, and where employers set up for business. However, it is well known that the economy has transformed in recent decades. This transformation has many dimensions. A partial list would include (1) changes associated with advances in technology and, in particular, computerization; (2) changes associated with increased international trade and globalization; (3) institutional changes, such as changes to public policy and organization of labour (such as unionization); (4) shifts in industrial structure from a goods-producing economy to a services-producing economy; (5) shifts in labour supply as more women enter the workforce and as higher education becomes more the norm for workers; and (6) changes in the way employers organize their workforces, perhaps shifting towards more part-time and contingent work.

Much is known about how the Canadian economy has reacted in the face of these challenges. However, national and city trends do not always run in parallel. Accordingly, this report delves below the national picture. It focuses on three major aspects of economic conditions: the labour market, business activity, and population growth and mobility. The objective is to examine major trends at the local level, and to profile several well known national economic developments, to uncover how the city's economic landscape has changed in recent decades.

The report examines levels and trends among Canada's 27 Census Metropolitan Areas (CMAs) from 1981 to 2001.[1] CMAs comprise Canada's most urbanized areas and more than two-thirds of Canada's population. It is not surprising that there is substantial heterogeneity among economic outcomes across Canada's CMAs. Accordingly, the report does not try to form a summary of economic activity at the CMA level. Rather, it presents the findings as a series of stylized facts that can then be used by city planners and in policy assessments of what makes a healthy city.

This report is the sixth report in a series, Trends and Conditions in CMAs, that develops statistical measures that shed light upon issues of importance for Canada's largest cities. Interested readers are encouraged to look to the rest of the series for detailed reports on Low Income, Health, Immigration, Culture, Housing, Aboriginal People, and Place of Work and Commuting.

Labour markets in CMAs

The first section of the report examines labour market issues. In terms of employment, unemployment and earnings, CMAs as a group were in virtually the same situation in 2001 as they were in 1981. Likewise, rankings in these indicators changed very little for most CMAs over the 20-year period. However, stability in aggregate indicators and in the ranking of CMAs masked two important trends among CMAs:

1. A census metropolitan area (CMA) is the area formed by one or more adjacent municipalities centred on a large urban area (known as the urban core). To be included in the CMA, other adjacent municipalities must have a high degree of integration with the central urban area, as measured by commuting flows derived from census place-of-work data. The census population count of the urban core is at least 100,000 to form a census metropolitan area. The universe of CMAs as of the 2001 census (and included in this study) is St. John's, Halifax, Saint John, Chicoutimi–Jonquière, Québec, Sherbrooke, Trois-Rivières, Montréal, Ottawa–Hull, Kingston, Oshawa, Toronto, Hamilton, St. Catharines–Niagara, Kitchener, London, Windsor, Sudbury, Thunder Bay, Winnipeg, Regina, Saskatoon, Calgary, Edmonton, Abbotsford, Vancouver and Victoria.

CMAs became more alike in their labour market outcomes

It is well known that different CMAs, as with different regions of Canada, are often divided into "have" and "have not." This is especially true of CMA labour markets. For example, some CMAs have high unemployment rates and others have low unemployment rates. But is the difference between these "have" and "have not" CMAs increasing or decreasing?

In all CMAs combined, the unemployment and employment rates were virtually identical in 2001 and 1981. However, most CMAs' employment and unemployment rates converged towards the all-CMAs average between 1981 and 2001. The major driver of this appears to have been improvements in employment and unemployment rates in CMAs that, in 1981, had relatively poor performance. For example, of the 6 CMAs that had unemployment rates greater than 10% in 1981, only 2 had rates over 10% in 2001. At the same time, of the 3 CMAs that had unemployment rates less than 4% in 1981, none still had rates that low in 2001.

Similarly, CMAs became more alike in the share of workers working full year (as opposed to part year or "seasonally"). While full-year work became more common in all CMAs between 1980 and 2000, it became even more prevalent in CMAs where part-year work was relatively concentrated in 1980. Full-year work increased the most in 3 CMAs commonly associated with the automotive sector: Windsor, Oshawa, and St. Catharines–Niagara.

While differences among CMAs in employment, unemployment, and work activity were reduced over the last 20 years, differences in annual earnings[2] of workers were not. In 1981 the difference between the highest-earning CMA and the lowest was $9,900. By 2001 this was $11,800. The increase in the range was due to a deterioration of median earnings among some of the lowest-earning CMAs.

Work and earnings were distributed to different people

Overall stability in the employment rate also masks changes experienced by some groups. For example, the employment rate of men in CMAs fell from 75.8% in 1981 to 69.3% in 2001, and rose for women in CMAs from 56.4% in 1981 to 58.2% in 2001. This increased women's relative employment rate to 64% that of men's in 1981 to 84% in 2001.

Real annual earnings declined among men and rose among women in virtually all CMAs. While annual earnings in 2000 were still higher for men than women, women's annual earnings rose by 14% while men's fell by about 4% between 1980 and 2000.

Employment rates also deteriorated for recent immigrants (those who immigrated in the 10 years preceding the census), but rose for the Canadian-born between 1981 and 2001. In 1981 the employment rates of recent immigrants and Canadian-born persons were about equal. However, rising employment among the Canadian-born, combined with falling employment among recent immigrants, increased the employment-rate gap to 14.3 percentage points in favour of the Canadian-born. This trend will have placed downward pressure on employment rates in CMAs with large recent immigrant populations, such as Toronto and Vancouver.

The report also examined unemployment rates and earnings among young workers and low-educated workers. It finds that unemployment rates were higher and earnings were lower for both of these groups and that young workers fell behind in earnings.

2. All earnings figures are for full-year full-time workers only.

At the same time, the earnings gap between high and low earners widened. Earnings measured at the 10th percentile (representing the worker who has lower earnings than exactly 90% of other workers) fell in all CMAs, and by 20% or more in more than half of the CMAs. A fall of this magnitude represents a decline of $3,000 to $4,000 from total annual earnings of less than $20,000 in most CMAs. Earnings fell for low-paid workers whether they were men or women, but they fell more for men. In contrast to falling earnings for low-paid workers, top earners enjoyed rising earnings over the period in most CMAs.

Business activity in CMAs

The second section of the report examines business activity in CMAs. The major theme to emerge from this section is that the services sector continued to dominate CMA employment and employment growth in the most recent decade.

CMAs differed in their services sector orientations

Fully 78.1% of workers in CMAs worked in service sector jobs. However, such numbers mask substantial differences among CMAs. In Windsor, Kitchener, and Abbotsford, for instance, the fraction of the workforce employed in goods-producing industries was relatively high.

Almost all CMAs became more services-oriented over the 1990s. Underlying this shift in orientation was a decline in manufacturing and a rise in business services industries.

Manufacturing lost employment share in most CMAs between 1989 and 2003. Montréal, experienced a 5.1% decline in the share of manufacturing employment in that CMA, while in Toronto, the share of employment that was in manufacturing fell by 2.1%. Manufacturing's share of employment fell by more than 2% in 10 CMAs.

At the same time, the share of employment in business services grew in most CMAs. This was especially true in the professional, scientific, and technical services industry, where employment share grew by more than 2% in 11 CMAs, and in the administrative and support, waste management, and remediation services industries where employment share grew by more than 2% in 9 CMAs.

Manufacturing was concentrated in a few CMAs, but business services were spread more equally across CMAs

Manufacturing was most concentrated in central Canada CMAs. Two CMAs in particular, Sherbrooke and Windsor, increased their concentration in manufacturing over the 1986 to 2001 period, perhaps reflecting their proximities to major US markets.

Business services were less concentrated in CMAs than manufacturing. This is important since it suggests that the well-remunerated jobs in business services may be more equally distributed across Canadian cities. Nevertheless, business services were more concentrated in Toronto, Calgary, and Vancouver—both in 1986 and in 2001. Montréal, despite being the second largest CMA, had only the fifth highest concentration of business services among CMAs.

Meanwhile, the largest CMAs became less industrially diverse over the 1986 to 2001 period, while smaller CMAs did not, as a group, become more or less diverse. It may be that the increasing importance of international trade has led Canada's largest metropolitan areas to increasingly specialize. With increased international trade, urban regions can be expected to increasingly specialize in industries where they hold a comparative advantage.

The dynamics of the manufacturing and services sectors are embodied together in the computer and telecommunications sector. The section on business activity concludes with a profile of this industry.

Population growth and mobility in CMAs

The third and final section of the report examines population growth and mobility at the CMA level. In a survey of economic conditions, it is important to examine population growth and mobility. In an environment where most of the population growth is the result of immigration, and most immigrants are highly educated, immigrants contribute to both the local labour supply and local human-capital pool that is necessary for growth. Internal mobility can be thought of as an adjustment factor: people will move to regions where their skills and services are most in demand and, on balance, will move away from economically depressed regions towards more prosperous ones. As with immigration, internal movers are also disproportionately young and highly educated, contributing to the growth of some regions, and detracting from others.

Inter-CMA mobility is an important factor in the growth of smaller CMAs

Larger CMAs received most of their population growth from immigration, and these immigrants contributed significantly to the human-capital pool of these CMAs.

Other CMAs received significant population growth from internal migration. However, for many CMAs, the population they lost to other CMAs was substantially larger than the population they gained. CMAs that lost population to other CMAs were predominantly smaller CMAs. Fully 9 out of 10 CMAs with a population under 200,000 lost population to other CMAs.

Young people are more mobile than older and are disproportionately seen among internal migrants. Indeed, CMAs that lost population to other CMAs as a result of inter-CMA mobility, tended to lose disproportionately larger shares of young people. For example, Chicoutimi–Jonquière lost 3.9% of its population to other CMAs, but lost 7.9% of its population aged 29 and under.

Likewise, highly educated people are more mobile. Accordingly, CMAs that lost population to inter-CMA mobility lost disproportionately larger shares of university graduates. Smaller CMAs are shown to be exporting their "best and brightest" and losing important sources of capital necessary for future growth in the region. In some cases, these losses to inter-CMA mobility were quite large. For example, between 1996 and 2001, Québec lost 2.8% of its population to inter-CMA mobility. Looking among university graduates, Québec lost 4.2% more than they gained from other CMAs.

Introduction

This report examines three important dimensions of economic activity in Canada's 27 Census Metropolitan Areas (CMAs): labour markets, business activity, and population growth and mobility.[3] The 27 CMAs represent the most urbanized areas of Canada and, as a group, comprised about 64% of Canada's population in 2001. Hence, CMAs are important centres of economic activity.

The objective of this report is to provide information on economic conditions in CMAs that can be used to inform the development of federal policy in the cities agenda. It is strictly descriptive and will not delve into the causes of economic growth, or why one CMA may be growing faster than another. Other reports in the series, *Trends and Conditions in CMAs,* cover Low Income, Health, Immigration, Culture, Housing, Aboriginal People, and Place of Work and Commuting in more detail.

The information in this report is presented in three sections. The first section focuses on labour markets in CMAs. It begins with a brief discussion of population growth and demographics. The report then discusses three major dimensions of work and job quality: employment, earnings, and work activity.[4] Emphasis is placed on CMA-level trends and trends among different demographic groups. For example, the section examines the rise in women's labour market participation, declining youth employment, and relative earnings; the earnings premium associated with having a university education; and the declining employment of recent immigrants.

The second section focuses on business conditions in CMAs and tracks the change in industrial composition from goods production to services production. Some descriptive statistics on business creation and destruction and fast growing firms (or "gazelles") are presented. Finally, this section focuses on the computer and telecommunications sector—one particularly dynamic sector, which formed the core of what analysts termed "the new economy" in the late 1990s and early 2000s.

The third section of the report examines population flows among CMAs. Mobility is in large part driven by expectations of relative economic returns offered by different regions of the country. Moving is expensive and workers would seldom move if the economic payoff were low. Hence, an examination of mobility patterns paints a picture of how workers view their prospects in different CMAs. Additionally, mobility can be seen as an adjustment factor that equalizes labour markets and reduces regional disparities. However, it may also concentrate human resources and lead to the draining of the "best and brightest" from lower income regions, worsening regional differences. Accordingly, the section also profiles mobility flows among the young and highly educated.

3. A census metropolitan area (CMA) is the area formed by one or more adjacent municipalities centred on a large urban area (known as the urban core). To be included in the CMA, other adjacent municipalities must have a high degree of integration with the central urban area, as measured by commuting flows derived from census place-of-work data. The census population count of the urban core is at least 100,000 to form a census metropolitan area. The universe of CMAs as of the 2001 Census (and included in this study) is St. John's, Halifax, Saint John, Chicoutimi–Jonquière, Québec, Sherbrooke, Trois-Rivières, Montréal, Ottawa–Hull, Kingston, Oshawa, Toronto, Hamilton, St. Catharines–Niagara, Kitchener, London, Windsor, Sudbury, Thunder Bay, Winnipeg, Regina, Saskatoon, Calgary, Edmonton, Abbotsford, Vancouver, and Victoria. For comparisons to the non-CMA sector, the non-CMA sector is defined as all of Canada, not including the 27 CMAs.

4. Work activity refers to whether the worker worked full or part year and full or part time.

The principal data sources used in this report are the 1981, 1991, and 2001 censuses of Canada and the 1987 to 2003 Labour Force Survey (LFS). The census is administered to the entire population of Canada, but 1 in 5 households receive a detailed questionnaire, which is the source of most of the information used in this paper.[5] The census offers the advantage of describing the Canadian population across a number of economic dimensions and is a rich source of information on employment and unemployment, industrial structure, and mobility. Furthermore, it is a large dataset, which improves the reliability of the estimates, especially when disaggregating the data across several CMAs and several industries. However, the census also has weaknesses.[6] Consequently, this paper also includes many indicators from the Labour Force Survey (LFS).

A note on CMA boundaries

Before proceeding, it is important to note that this study uses two different ways of measuring CMA boundaries: (1) the *CMA boundaries held constant* approach, and (2) the *CMA boundaries allowed to expand* approach.

The issue arises because the geographic size of a CMA typically changes across censuses. New municipalities are added to the CMA as the urban core of the CMA increases its influence on further outlying municipalities. Generally, this is due to the process of suburbanization, where workers in the CMA move to suburbs outside of the CMA and integrate the suburb into the CMA. At the same time, those who live in the outlying municipalities may become more integrated with the nearby CMA. When this pattern of integration reaches a substantial level, the CMA boundary is redrawn to account for the fact that the labour market of the CMA has expanded.[7]

When comparing the size of CMAs across time, one may choose to measure size on a *boundaries held constant* basis or on a *boundaries allowed to expand* basis. Both approaches have strengths. The *boundaries held constant basis* has the advantage of gauging growth across a constant denominator. This is easiest to understand and is the approach followed by Statistics Canada in its "Community Profiles" series. It seems most appropriate to use this method when examining changes in CMA size over short periods of time, such as across the five year span between censuses. This allows for consistency between this report and already published census numbers, and allows one to relate population changes to components related to birth, death, and migration as distinct from those related to expanding CMA boundaries. The *boundaries allowed to expand basis* allows one to gauge the influence the CMA has on its expanding geographic base. As noted above, as CMAs grow in size over a longer period of time (such as across a 20-year period), they draw in more distant municipalities through suburbanization, as well as integrating the existing population of these municipalities into the economy of the CMA. These are events that one would like to measure when considering the importance of the CMA in its region. Hence when examining changes over a longer period of time the study uses the *boundaries allowed to expand* basis. In these cases the CMA boundaries are as defined in their respective census years.[8]

5. The census incorporates three types of questions: Those that refer to the day of the census, those that refer to a reference week, usually the week before the census, and those that refer to the year preceding the census. For example, population estimates are based on the census day, employment estimates are based on the reference week preceding the survey, and earnings estimates are based upon the year preceding the survey.
6. First, employment in the census refers to employment held in the census reference week, which is usually the week prior to the May census day (in some years the census day was in June). Hence, the estimates of employment from the census reflect employment only at one point during the year, rather than all year as in the LFS. Second, the census is only available at five-year intervals. Third, the Census was not coded using NAICS industry codes before the 2001 census. However, consistent data from the 1986 to 2001 censuses is available using the SIC-E 1980 classification.
7. The redrawing of CMA boundaries can also happen as a result of municipal boundary changes resulting from amalgamation. This happened between 1996 and 2001, affecting some Ontario CMAs in particular.
8. When examining longer time series it is also necessary to drop the institutional and non-permanent resident populations from the analysis since some information for these groups was not collected in earlier censuses.

However, when using data from the Labour Force Survey, statistics are always presented on a constant boundaries basis. The Labour Force Survey has held CMA boundaries constant at their 1996 basis from 1987 to the present.[9]

9. The Labour Force Survey (LFS) collects information only on the non-institutional population. Furthermore, in the LFS information for the smaller CMAs of Kingston and Abbotsford refer to "Urban Centres" rather than CMAs.

Part 1

Labour markets in CMAs

Chapter 1

Population and the importance of CMAs in Canada's economy

This chapter examines population and population growth among CMAs. The first objective of this is to provide useful context for the remainder of the report. The second objective is to derive insights into the economic importance of CMAs, coming from their relative size, their fast growth, and their relative concentration in highly educated workers.

1.1 CMAs are faster growing, but population growth differed across CMAs

The 27 CMAs comprise about 64% of Canada's population (Table 1.1). Beyond comprising more people, CMAs are also faster growing than other areas, increasing their population by 6.2% between 1996 and 2001 compared to just 0.4% in non-CMAs. This growth in the CMA sector is a continuation of a long-term trend. Between 1981 and 2001 the population of CMAs (with boundaries as represented in their respective census years) grew from 13.7 million to 18.9 million (up 38.2%) compared to non-CMAs, which grew from 10.1 to 10.5 million (up 4.1%). This increased the share of the population living in CMAs from 57.5% to 64.2%.

Population growth was concentrated in 3 large urban areas between 1996 and 2001: the British Columbia lower mainland, Calgary and Edmonton, and the extended Golden Horseshoe. Calgary gained the most population of all CMAs with a 15.8% increase in total population, and Edmonton grew by 8.7%. In B.C., Abbotsford and Vancouver both grew by at least twice the Canadian average. The Golden Horseshoe CMAs of Oshawa, Toronto, Hamilton, and Kitchener all grew by substantial margins. Two other CMAs that grew at a faster rate than the all-CMA average were Windsor (+7.3%) and Ottawa–Hull (+6.5%).

Seven CMAs lost population over the 1996 to 2001 period. The most affected area was Northern Ontario, where Sudbury and Thunder Bay respectively lost 6.0% and 3.7% of their population. Other declining CMAs included smaller Quebec CMAs of Chicoutimi–Jonquière and Trois-Rivières, and the 2 smaller Atlantic CMAs of St. John's and Saint John. Regina was the only western CMA to lose population between 1996 and 2001.

1.2 More of the CMA workforce has a university degree compared to the non-CMA workforce

One factor that distinguishes cities from other areas is their concentration of highly educated workers. This is important as many believe that the knowledge base in a city provides the conditions for growth and that wherever knowledge clusters, wealth will also cluster. Having a skilled labour force may be required for attracting certain types of industries to a local economy. For example, high tech firms may be more likely to locate where the population is highly educated. Furthermore, if one is interested in relative output or relative growth among regions of Canada, one would want to know about the composition of regional workforces.

Workers (including the employed and unemployed) with a university degree are concentrated in CMAs. In 2001, 23.1% of the CMA workforce had a university degree, compared to 10.9% of workers in non-CMAs (Table 1.2). From 1981 to 2001, the share of university graduates in the workforce also rose much

faster in CMA than in non-CMAs. Over this period the share of workers that had a university degree rose 10.0 percentage points in CMAs, while the corresponding share in non-CMAs rose just 4.1 points.

University graduates as a share of the CMA workforce varies from CMA to CMA. In 2001 this share ranged from a high of 30.3% in Ottawa–Hull to 11.6% in Abbotsford. Other CMAs with relatively low shares of university graduates in the workforce included Oshawa, St. Catharines–Niagara, and Sudbury. In 2001 all CMAs had a share of university graduates greater than the corresponding share in non-CMAs.

Between 1981 and 2001, the share of the workforce that had a university education grew by 10 percentage points or more in Montréal, Ottawa–Hull, Toronto, Vancouver and Victoria (Table 1.2). The share also grew faster in each CMA than it did in the non-CMAs, indicating that each CMA's relative advantage in the educated workforce has increased over time, as compared to non-CMAs.[10]

1.3 Population grew mostly because of immigration

Population growth in CMAs was mostly the result of immigration, which has been concentrated in Canada's CMAs, and especially in the largest CMAs. In another report in this series on *Trends and Conditions in CMAs*, Schellenberg (2004) examined the settlement patterns of immigrants across CMAs and found that virtually all immigrants who had arrived in Canada over the decade preceding the 2001 Census resided in one of Canada's 27 CMAs. Of these, 73% chose to settle in Toronto, Vancouver, or Montréal. Hence, differences in immigration settlement patterns largely explain why population growth in CMAs differed markedly from non-CMAs over the past decades. It is also notable that immigrants are more likely than the Canadian-born to hold a university degree, and thus are an important source of human capital to CMAs. Section 3 of this report examines population growth between 1996 and 2001 and considers the impact of immigration as well as internal mobility on population growth.

10. Examination of human-capital stocks as reflected in the distribution of occupations by National Occupation Classification skill level yielded similar results.

Table 1.1: CMA populations and growth rates, 1996-2001[a]

	1996	2001	% growth 1996 to 2001
St. John's	174,051	172,918	-0.7
Halifax	342,966	359,183	4.7
Saint John	125,705	122,678	-2.4
Chicoutimi–Jonquière	160,454	154,938	-3.4
Québec	671,889	682,757	1.6
Sherbrooke	149,569	153,811	2.8
Trois-Rivières	139,956	137,507	-1.7
Montréal	3,326,447	3,426,350	3.0
Ottawa–Hull	998,718	1,063,664	6.5
Kingston	144,528	146,838	1.6
Oshawa	268,773	296,298	10.2
Toronto	4,263,759	4,682,897	9.8
Hamilton	624,360	662,401	6.1
St. Catharines–Niagara	372,406	377,009	1.2
Kitchener	382,940	414,284	8.2
London	416,546	432,451	3.8
Windsor	286,811	307,877	7.3
Sudbury	165,618	155,601	-6.0
Thunder Bay	126,643	121,986	-3.7
Winnipeg	667,093	671,274	0.6
Regina	193,652	192,800	-0.4
Saskatoon	219,056	225,927	3.1
Calgary	821,628	951,395	15.8
Edmonton	862,597	937,845	8.7
Abbotsford	136,480	147,370	8.0
Vancouver	1,831,665	1,986,965	8.5
Victoria	304,287	311,902	2.5
All CMAs	18,178,597	19,296,926	6.2
Non-CMAs	10,668,163	10,710,168	0.4
All Canada	28,846,760	30,007,094	4.0

a. Includes institutional residents and non-permanent residents. CMA boundaries as defined in 2001.
Source: Census analysis series: *A profile of the Canadian population: Where we live.*

Table 1.2: Share of workers[a] with a university degree (%)

	1981	1991	2001	2001 minus 1981
St. John's	11.6	15.7	21.1	9.5
Halifax	15.6	20.5	25.5	9.9
Saint John	9.5	11.9	16.6	7.1
Chicoutimi–Jonquière	9.8	12.3	15.3	5.5
Québec	13.7	18.1	22.0	8.3
Sherbrooke	12.6	15.7	18.5	5.9
Trois-Rivières	10.0	13.0	16.5	6.5
Montréal	12.2	17.2	22.2	10.0
Ottawa–Hull	19.0	24.2	30.3	11.3
Kingston	14.9	18.9	21.4	6.4
Oshawa	7.1	10.3	13.4	6.3
Toronto	14.2	20.4	27.6	13.5
Hamilton	10.2	14.0	18.3	8.1
St. Catharines–Niagara	8.0	10.7	13.6	5.6
Kitchener	10.3	14.1	17.8	7.5
London	13.5	16.3	18.8	5.3
Windsor	10.5	13.6	18.5	8.0
Sudbury	8.9	12.2	14.2	5.3
Thunder Bay	9.1	12.4	16.4	7.3
Winnipeg	12.3	16.3	19.9	7.6
Regina	12.1	16.0	18.6	6.6
Saskatoon	13.8	16.9	20.4	6.6
Calgary	15.5	19.0	23.8	8.3
Edmonton	13.8	15.5	18.5	4.7
Abbotsford	7.4	9.1	11.6	4.3
Vancouver	13.1	17.2	24.6	11.5
Victoria	13.3	17.1	23.3	10.0
All CMAs	13.1	17.7	23.1	10.0
Non-CMA	6.8	8.6	10.9	4.1
All Canada	10.7	14.4	18.9	8.3

a: Includes employed and unemployed. Excludes institutional residents and non-permanent residents.
Source: Census 1981, 1991, 2001.

Chapter 2

Employment and unemployment

Employment structure and growth lie at the core of economic development in all metropolitan areas. This chapter looks at employment and unemployment trends in CMAs. To begin, the focus of the analysis is on how CMAs differ from one another and from non-CMA regions, and the extent to which these differences increased or decreased over the past two decades. Following this, the chapter documents major labour market developments among four groups that have received attention in other work conducted at the national level: women, immigrants, young persons, and the less educated. The objective is to provide more detailed information on these groups than is usually made available from national level analyses and to assess how CMA labour markets differ.

2.1 Employment failed to keep pace with rapid population growth during the 1990s in Toronto, but not in other CMAs

Considering all CMAs combined, from 1989 to 2003, employment failed to keep up with the rapid population growth in CMAs as the population aged 15 and over grew by 24.4% in CMAs and employment grew by 21.2%. In non-CMAs, employment growth (17.4%) exceeded population growth (14.8%) (Figure 2.1).[11]

Relative to its population growth, Toronto received a disproportionately small share of Canada's employment growth. This can be seen in Table 2.1, which shows that Toronto received 24.5% of Canada's population growth between 1989 and 2003, but just 19.3% of its employment growth. Most of the other large CMAs received more than their share of employment growth. Montréal received 7.8% of the population growth but 9.1% of the employment growth. Calgary, Edmonton, Québec, and Winnipeg each received more than their share of employment growth. Ottawa–Hull received exactly its share of employment growth, and Vancouver received slightly less than its share. The other 19 CMAs combined received slightly less than their share of employment growth, and the non-CMAs received slightly more than their share.

2.2 The 1990–1992 recession was deeper in CMAs than non-CMAs

CMAs suffered a deeper recession in the early 1990s than non-CMAs. Comparing "peak to trough" in the business cycle, the employment rate fell between 1989 and 1993 by 5.1 percentage points in CMAs (Figure 2.2). In the non-CMA region the employment rate fell by just 2.6 points between 1989 and 1992 (the recession bottomed out 1 year earlier in the non-CMA). Similarly, the rise in the unemployment rate was also larger in CMAs. While in most years the unemployment rate was between 1 and 2 percentage points lower in CMAs than non-CMAs, the unemployment rate rose more in the 1990s recession in CMAs (Figure 2.3).

11. 1989 and 2003 are years near business cycle peaks, allowing the analysis to abstract from changes related to the business cycle. When discussing the labour force in CMAs, one is restricted to the population that is 15 years of age or older, since younger persons are not considered to be in the labour force.

It is likely that the poor economic performance of the early 1990s had a major impact on many indicators of economic and social well-being.[12] That the decline was larger in CMAs indicates that CMA regions may have shouldered a disproportionate share of the costs of slow growth across the decade. Furthermore, it appears that the recession hit some CMAs worse than others. For example, between 1989 and 1993 the employment rate in Toronto fell by 8.8 percentage points, compared to 5.0 points in Montréal, and 1.5 points in Vancouver.[13]

2.3 Employment rates vary substantially across CMAs and tended to grow more in smaller CMAs

While the previous tables used Labour Force Survey (LFS) data, an alternative source of information is the census. The large sample available in the census allows one to examine the labour force in smaller CMAs with enhanced precision. As noted earlier, employment and unemployment rates computed with the census refer to labour force status in the week prior to the census day—typically in the month of May.

The employment rate varies substantially across CMAs, with the highest and lowest rates being separated by a margin of 20 percentage points in 2001. At 71.6%, Calgary had the highest employment rate in 2001. The employment rate was much lower in Trois-Rivières (54.3%) and Chicoutimi–Jonquière (51.7%) (Table 2.2).

Comparing 1981 and 2001, the employment rate rose in some CMAs and fell in others. The largest increases were noted in Windsor (up 7.1 points), Québec (up 5.3 points), and Sherbrooke (up 5.2 points). Toronto and Vancouver saw the largest declines in the employment rate, falling 3.3 points and 2.5 points in these CMAs respectively. The employment rate also grew slightly faster in non-CMAs than CMAs.

Between 1981 and 2001, the declines in the employment rate were noted in some areas that traditionally had above average employment rates (Alberta in particular), and employment growth was noted in areas which traditionally had low employment rates (Atlantic Canada, Quebec, and British Columbia). Employment rates also rose in medium and small CMAs, which had lower employment rates in 1981, but changed little in larger CMAs, which had higher employment rates in 1981. As a result, the difference between the maximum and the minimum employment rate was smaller in 2001 (19.9 percentage points) than it was in 1981 (25.6 points).

2.4 Similar conclusions are drawn when looking at CMA unemployment rates

Like employment rates, unemployment rates also varied substantially by CMA (Table 2.3). In 2001 Calgary had the lowest unemployment rate of all CMAs (4.9%) and Chicoutimi–Jonquière had the highest (12.4%). Nine other cities had unemployment rates of 6% or less in 2001: Edmonton, Kitchener, Ottawa–Hull, Winnipeg, Hamilton, Toronto, Regina, Oshawa, and St. Catharines–Niagara. Only two CMAs had unemployment rates above 10%: St. John's (11.3%) and Chicoutimi–Jonquière (12.4%).

CMA unemployment rates have also converged over the period. The maximum unemployment rate observed in CMAs fell from 15.8% in 1981 to 12.4% in 2001 and the minimum rose from 3.2% to 4.9%. Underlying this convergence, unemployment rates fell in some high unemployment regions (most notably in Quebec) and rose in some low unemployment rate regions (especially Alberta and British Columbia) between 1981 and 2001. Unemployment rates also fell more in smaller CMAs (where rates had tended to be higher) than they did in larger CMAs (where rates had tended to be lower).

12. See, for example, the papers in *The Review of Economic Performance and Social Progress*: The Longest Decade: Canada in the 1990s." K. Banting, A. Sharpe, and F. St-Hilaire, (eds.). Montreal: Institute for Research on Public Policy and Centre for the Study of Living Standards.
13. Labour Force Historical Review, 2003, Statistics Canada, Catalogue no. 71F0004XCB.

2.5 The employment rate gap between recent immigrants and the Canadian-born increased substantially in CMAs

As noted earlier in this report, the rapid acceleration of population in some CMAs (especially Toronto and Vancouver) was driven by immigration. Immigrants face a more difficult time securing employment, as do all new entrants to the labour market. As a result, this rapid acceleration of the CMA population places special pressures on its labour market.

What were the employment prospects of new immigrants to Canada? In the third volume in this series on *Trends and Conditions in CMAs* it was established that recent immigrants had lower employment rates than others in CMAs in 2001 (Schellenberg, 2004). In this subsection we examine how this phenomenon evolved over time, and what impact this had on CMA employment rates.

Table 2.4 shows employment rates for the Canadian-born, as well as for immigrants who are classified into three groups depending upon their date of immigration to Canada. Recent immigrants are those who immigrated in the 10 years preceding the census, medium-term immigrants are those who immigrated between 10 and 20 years preceding the census, and long-term immigrants are those who immigrated more than 20 years ago.[14] Because of expected age differences across groups (for example, long-term immigrants will be older than recent immigrants on average), this table standardizes the population by looking only at the 25- to 54-year-old group.

In all CMAs combined, the 2001 employment rate for recent immigrants was 68.0%, and ranged from 76.7% in Winnipeg to 60.3% in Montréal. This compares to employment rates among the Canadian-born, which averaged 83.2% across all CMAs with a minimum rate of 80.9% in Abbotsford. In relative terms, employment rates of recent immigrants were 81% that of the Canadian-born in all CMAs, but was as low as 73% that of the Canadian-born in Montréal.

The employment rate for recent immigrants residing in CMAs fell from 78.2% in 1981 to 68.9% in 1991 then further to 68.0% in 2001. This fall in employment was observed in most CMAs with large recent immigrant populations. In the largest CMAs, the recent immigrant employment rate fell 11.7 points in Montréal, 10.0 points in Toronto, and 14.4 points in Vancouver. Most other CMAs saw declines in the recent immigrant employment rate of a similar magnitude. Three exceptions were Windsor, Abbotsford, and Victoria, where employment rates among recent immigrants over the 1981 to 2001 period also declined, but the change was marginal.

Compared to recent immigrants, employment rates among medium- and longer-term immigrants were relatively stable. For example, medium-term immigrants in all CMAs combined saw their employment rates fall marginally from 81.0% in 1981 to 79.5% in 2001. Long-term immigrants in all CMAs saw employment rates rise from 79.2% to 82.4%.

More substantial improvements were observed among the 25- to 54-year-old Canadian-born CMA population. This group saw employment rates rise from 75.7% in 1981 to 80.1% in 1991 and then further to 83.2% in 2001. This growth was enjoyed to some degree by all CMAs and the non-CMA region.

Comparing recent immigrants with the Canadian-born, it is notable that employment rates for these two groups were quite similar in 1981, but by 2001 they had diverged due to a rise in Canadian-born employment rates and a fall in recent immigrant employment rates. Taking Toronto as one example, the gap between the recent immigrant employment rate and the Canadian-born employment rate was just one half of a percentage point in 1981, but rising employment among the Canadian-born, combined with

14. To take the 2001 Census as an example, recent immigrants are those who immigrated between 1991 and 2001 inclusive, medium-term immigrants are those who immigrated between 1981 and 1990, and long-term immigrants are those who immigrated in 1980 or earlier.

falling employment among recent immigrants, served to increase this gap to 14.3 points in favour of the Canadian-born by 2001.

In non-CMAs the employment rate among recent immigrants was 74.0%, well above the all CMA average, however, recent immigrants only comprise a very small share of the population in non-CMAs—amounting to just 1.3% of the non-CMA population in the 25- to 54-year-old category, as compared to 11.3% of the CMA population in this group.

Given that recent immigrants make up a substantial proportion of the population in some CMAs, declining employment rates among recent immigrants will place some downward pressure on the overall CMA employment rate. In Toronto and Vancouver, the employment rate fell substantially only among recent immigrants, indicating that the CMA-wide fall in the employment rate in those CMAs was concentrated among recent immigrants.

2.6 Women increased their employment rate relative to men in CMAs

It is well known that one major development in the labour market in recent decades has been the increased integration of women into the labour force. Has this phenomenon developed the same way in all CMAs?

Table 2.5 shows employment rates among men and women by CMA in 1981, 1991, and 2001. Several stylized facts can be derived from this table. First, male employment rates fell across the 1981 to 2001 period in most regions. In all CMAs combined, the male employment rate fell by 6.5 percentage points from 75.8% in 1981 to 69.3% in 2001. Male employment rates fell most in the two Northern Ontario CMAs: Sudbury (down 11.3 percentage points to 59.8%—the lowest male employment rate among CMAs), and Thunder Bay (down 13.4 points to 61.6%). The male employment rate fell by more than 5 points in 18 other CMAs. In non-CMAs, the male employment rate fell 5.9 points from 69.6% to 63.7%.

Second, female employment rates rose over the period, up 6.7 points to 58.2% in 2001 in CMAs. Thus, women closed the employment gap with men, increasing their employment rate from 68% that of men in 1981 in CMAs to 84% that of men in 2001. Women's employment rates rose more than 10 percentage points in Chicoutimi–Jonquière, Québec, Sherbrooke, Trois-Rivières, Oshawa, St. Catharines–Niagara, Windsor, Sudbury, and Abbotsford. Each of these CMAs had lower than average female employment rates in 1981, which indicates that those CMAs with the lowest employment rates increased their rates the most. This led to some inter-CMA convergence of women's employment rates as the maximum-to-minimum spread declined from 30.2 percentage points to 21.9 percentage points between 1981 and 2001. The female employment rate rose 11.7 percentage points reaching a level of 52.7% in non-CMAs.

Women increased their employment rates relative to men in all CMAs. By 2001 the level of integration of women in employment was between 80% and 90% that of men in most CMAs. Two exceptions were Chicoutimi–Jonquière and Trois-Rivières, where employment rates among women were just 73% and 77% that of men respectively. Both of these CMAs had comparatively lower female employment rates than other CMAs in 1981.

2.7 Youth unemployment rates remained steady in CMAs

The integration of young people into the labour market is a topic of concern to many. Table 2.6 shows unemployment rates for young people aged 15 to 24. It is well known that there have been large changes in the school participation rates of young people (towards more school enrolment), and this could have an effect on the unemployment rate that is not directly related to local labour market conditions. Hence full time students are excluded from the table.

The unemployment rate for 15- to 24-year-olds in CMAs in 2001 was, at 10.7%, nearly twice as high as the unemployment rate for all persons (which was 5.5%). It was highest in Chicoutimi–Jonquière at 23.3%, and rates above 15% were also observed in St. John's, Saint John, Trois-Rivières, Kingston, Sudbury, and Thunder Bay. Youth unemployment rates below 10% were observed in Toronto, Kitchener, Winnipeg, Calgary and Edmonton.

Comparing the CMA sector with the non-CMA sector, the unemployment rate for 15- to 24-year-olds in non-CMAs was, at 15.4%, nearly one third higher than the rate in CMAs.

Comparing 1981 and 2001, the youth unemployment rate (like the unemployment rates for all people) remained steady in all CMAs combined, but different trends were observed among CMAs. Most Quebec CMAs saw the youth unemployment rate fall by up to 7.2 points (observed in Québec). The youth unemployment rate also fell substantially in St. John's, Ottawa–Hull, St. Catharines–Niagara, and Windsor. At the same time it rose in Kingston, Toronto, London, Sudbury, and all western CMAs. The general pattern was one of convergence, where youth unemployment rates rose between 1981 and 2001 in CMAs with lower youth unemployment rates in 1981, and fell in CMAs with higher youth unemployment rates in 1981. For example, between 1981 and 2001 the number of CMAs with youth unemployment rates below 10% fell from 10 to 5.

2.8 The gap in unemployment rates between the low- and high-educated remained steady in most CMAs

In an era of technological advancement and other changes to the workforce, such as de-unionization and de-industrialization, it is often felt that it is the least educated that will be left behind. Table 2.7 shows unemployment rates according to the highest level of schooling attained.

Unemployment rates for workers with, at most, a high school degree were indeed higher than the general population. While unemployment rates in the CMAs in 2001 ranged from 4.9% to 12.4% (Table 2.3), among those with a high school or less education they ranged from 5.7% to 15.1%. In contrast, unemployment rates among university graduates ranged from 2.9% to 6.5% across CMAs.

In some CMAs, the difference between the unemployment rates of high school graduates and university graduates is striking. In all CMAs combined, the unemployment rate of those with high school or less education was 7.8% in 2001, compared to 4.7% for those with a university education (about 1.7 times higher). However, about half of the CMAs had unemployment rates among the high school or less population that were more than twice that of the university educated population. The most extreme example was Chicoutimi–Jonquière. In that CMA, the high school or less education group had the highest unemployment rate among CMAs at 15.1% while the university or more group had the lowest unemployment rate among CMAs at 3.4%. In the end, the unemployment rate was 4.4 times higher for low-educated persons in Chicoutimi–Jonquière.

Despite the changes in the economy that would be expected to reduce the economic outcomes of low- relative to high-educated workers, the relative unemployment rates of workers with low and high levels of education have remained fairly constant.

Considering all CMAs combined, the unemployment rate among workers with high school or less education rose slightly from 7.1% in 1981 to 7.8% in 2001. At the same time, the unemployment rate among university graduates rose from 4.0% to 4.7%, leaving the relative unemployment rate of less educated workers virtually unchanged (at 1.8 times in 1981 and 1.7 times in 2001). This pattern was evident in most CMAs. Exceptions include Saint John and Trois-Rivières where relative unemployment shifted somewhat in favour of highly educated workers, and Windsor where relative unemployment shifted

somewhat in favour of less educated workers (although in all cases unemployment rates of less educated workers remained higher).

There is some discussion of why the relative unemployment rate of lower educated workers has remained so constant. One often-cited explanation is that the supply of workers with high school or less education has fallen (meaning more and more workers are achieving higher levels of education) at the same time as demand for this lower-skilled worker is declining, resulting in steady unemployment rates. This report will pick up this discussion in Chapter 4 when it discusses relative earnings of less and more educated workers.

Table 2.1: Employment and population growth by CMA, 1989-2003

	Employment					Population				
	1989	2003	Growth, 1989 to 2003	Growth %	Share of all Canada growth	1989	2003	Growth, 1989 to 2003	Growth %	Share of all Canada growth
Toronto	2,144,900	2,676,900	532,000	24.8	19.3	3,084,600	4,149,600	1,065,000	34.5	24.5
Montréal	1,543,400	1,795,900	252,400	16.4	9.1	2,567,100	2,904,200	337,100	13.1	7.8
Vancouver	799,200	1,110,800	311,600	39.0	11.3	1,257,700	1,777,200	519,500	41.3	11.9
Ottawa–Hull	488,100	608,600	120,500	24.7	4.4	720,200	913,200	193,000	26.8	4.4
Calgary	389,900	594,900	205,000	52.6	7.4	557,800	836,900	279,000	50.0	6.4
Edmonton	415,600	536,700	121,100	29.1	4.4	623,700	783,100	159,400	25.6	3.7
Québec	298,100	358,600	60,500	20.3	2.2	505,300	576,400	71,200	14.1	1.6
Winnipeg	331,500	361,700	30,200	9.1	1.1	520,200	541,300	21,100	4.1	0.5
Other CMAs	2,180,000	2,549,800	369,800	17.0	13.4	3,452,300	4,055,400	603,100	17.5	13.9
All CMAs	8,590,700	10,593,900	2,003,100	23.3	72.6	13,288,900	16,537,300	3,248,400	24.4	74.7
Non-CMAs	4,395,800	5,152,100	756,400	17.2	27.4	7,613,000	8,713,300	1,100,300	14.5	25.3
All Canada	12,986,400	15,746,000	2,759,500	21.2	100.0	20,901,900	25,250,700	4,348,800	20.8	100.0

Source: Labour Force Survey, 1989-2003. Age 15+.

Table 2.2: Employment rates, all CMAs[a]

	1981	1991	2001	2001 minus 1981
St. John's	56.0	56.6	57.0	1.0
Halifax	62.1	64.5	63.1	1.0
Saint John	56.1	56.6	57.2	1.1
Chicoutimi–Jonquière	47.6	52.6	51.7	4.1
Québec	55.9	61.2	61.2	5.3
Sherbrooke	55.9	58.7	61.1	5.2
Trois-Rivières	50.4	53.3	54.3	3.9
Montréal	58.3	59.2	61.1	2.8
Ottawa–Hull	64.1	67.7	66.7	2.6
Kingston	61.5	64.9	61.0	-0.5
Oshawa	63.8	65.9	66.5	2.7
Toronto	68.3	65.9	65.0	-3.3
Hamilton	62.2	61.8	62.1	-0.1
St. Catharines–Niagara	58.2	58.3	59.6	1.4
Kitchener	66.8	66.4	67.9	1.1
London	64.7	64.8	63.1	-1.6
Windsor	54.6	57.2	61.7	7.1
Sudbury	56.6	59.9	56.3	-0.3
Thunder Bay	62.0	60.9	58.2	-3.8
Winnipeg	64.2	62.8	65.0	0.8
Regina	67.0	67.0	66.4	-0.6
Saskatoon	64.9	64.8	65.3	0.4
Calgary	73.2	69.9	71.6	-1.6
Edmonton	71.2	67.8	68.1	-3.1
Abbotsford	57.9	59.2	61.5	3.6
Vancouver	64.3	63.5	61.8	-2.5
Victoria	58.1	59.3	60.4	2.3
All CMAs	63.2	63.3	63.6	0.4
Non-CMAs	55.3	57.6	58.1	2.8
All Canada	60.0	61.1	61.6	1.6

a: Includes population 15+ only. Excludes non-permanent residents and institutional residents. Refers to labour force status in the week prior to the date of census collection.
Source: Census of Canada, 1981, 1991, 2001.

Table 2.3: Unemployment rates, all CMAs[a]

	1981	1991	2001	2001 minus 1981
St. John's	11.8	16.1	11.3	-0.5
Halifax	7.3	9.2	7.2	-0.1
Saint John	8.5	11.4	9.2	0.7
Chicoutimi–Jonquière	15.8	13.2	12.4	-3.4
Québec	11.0	9.1	6.9	-4.1
Sherbrooke	11.4	10.9	6.8	-4.6
Trois-Rivières	12.9	13.3	9.2	-3.7
Montréal	8.7	11.6	7.3	-1.4
Ottawa–Hull	6.8	7.2	5.5	-1.3
Kingston	7.2	7.4	6.9	-0.3
Oshawa	6.5	8.5	6.0	-0.5
Toronto	3.9	8.3	5.9	2.0
Hamilton	5.6	8.9	5.7	0.1
St. Catharines–Niagara	7.4	9.4	5.9	-1.5
Kitchener	5.3	8.9	5.5	0.2
London	6.3	8.5	6.6	0.3
Windsor	11.6	11.7	6.2	-5.4
Sudbury	8.1	8.6	9.1	1.0
Thunder Bay	6.9	9.5	8.8	1.9
Winnipeg	5.1	8.6	5.5	0.4
Regina	4.4	7.3	6.0	1.6
Saskatoon	6.0	8.7	6.7	0.7
Calgary	3.2	7.9	4.9	1.7
Edmonton	3.8	8.3	5.4	1.6
Abbotsford	5.7	10.5	8.2	2.5
Vancouver	5.0	9.2	7.2	2.2
Victoria	5.5	7.7	6.6	1.1
All CMAs	6.3	9.3	6.5	0.2
Non-CMAs	9.1	11.6	9.2	0.1
All Canada	7.4	10.1	7.4	0.0

a: Includes population 15+ only. Excludes non-permanent residents and institutional residents. Refers to labour force status in the week prior to the date of census collection.
Source: Census of Canada, 1981, 1991, 2001.

Table 2.4: Employment rates by immigrant status, selected CMAs, age 25-54[a]

	Canadian born			Recent immigrants[b]			Medium term immigrants[c]			Long-term immigrants[d]		
	1981	1991	2001	1981	1991	2001	1981	1991	2001	1981	1991	2001
Montréal	70.7	76.6	82.4	72.0	59.2	60.3	77.7	73.2	71.8	75.5	75.3	78.2
Ottawa–Hull	78.0	83.1	85.3	74.8	68.6	65.7	79.6	82.1	79.5	80.8	85.0	84.9
Toronto	81.8	84.0	85.6	81.3	71.5	71.3	83.3	81.6	81.5	81.7	81.9	83.1
Hamilton	76.7	80.2	82.7	74.1	67.4	67.6	78.4	79.7	79.0	77.4	81.3	80.4
Kitchener	80.0	83.0	86.2	77.9	69.1	67.3	81.9	80.4	80.6	79.2	82.8	84.0
London	79.0	82.3	83.1	75.4	66.2	61.0	80.1	80.9	79.1	78.9	82.4	81.5
Windsor	71.2	75.7	82.3	63.0	61.7	62.1	68.9	73.1	77.1	70.4	74.4	78.4
Winnipeg	78.6	80.9	83.4	83.7	73.7	76.7	83.1	84.5	86.2	78.2	84.1	85.3
Calgary	82.1	83.4	86.3	81.0	73.5	74.9	81.5	83.2	83.3	82.1	83.9	85.6
Edmonton	80.7	82.4	84.1	80.5	71.6	74.3	82.0	81.4	81.8	80.9	82.7	83.4
Abbotsford	72.6	78.9	80.9	73.3	62.7	72.6	80.7	75.8	75.3	74.0	80.1	80.4
Vancouver	78.8	81.2	83.0	77.8	68.9	63.4	81.1	81.9	77.2	79.1	81.5	82.0
Victoria	78.0	82.1	82.8	74.0	75.4	73.1	81.6	82.5	81.7	79.7	81.5	83.1
All CMAs	75.7	80.1	83.2	78.2	68.9	68.0	81.0	80.4	79.5	79.2	81.0	82.4
Non-CMAs	70.0	74.7	77.5	70.9	72.7	74.0	76.1	79.6	79.6	75.3	80.8	80.9
All Canada	73.1	77.9	80.9	77.1	69.2	68.3	80.2	80.3	79.5	78.3	81.0	82.1

a: Includes population aged 25–54 only. Excludes non-permanent residents and institutional residents. Refers to labour force status in the week prior to the date of census collection.
b: Recent immigrants are those who immigrated in the 10 years preceding the census.
c: Medium-term immigrants are those who immigrated between 10 and 20 years preceding the census.
d: Long-term immigrants are those who immigrated more than 20 years preceding the census.
Source: Census of Canada, 1981, 1991, 2001.

Table 2.5: Employment rates, men and women[a]

	Men			Women			Ratio		
	1981	1991	2001	1981	1991	2001	1981	1991	2001
					%				
St. John's	67.4	61.9	60.6	45.3	51.8	53.9	0.67	0.84	0.89
Halifax	74.7	72.6	68.5	50.6	57.0	58.2	0.68	0.79	0.85
Saint John	70.2	65.8	62.0	43.2	48.3	53.0	0.62	0.73	0.85
Chicoutimi–Jonquière	64.4	64.4	59.9	31.2	41.3	43.9	0.48	0.64	0.73
Québec	69.8	70.2	66.9	43.3	52.9	55.9	0.62	0.75	0.84
Sherbrooke	67.9	66.9	66.7	45.2	51.4	56.0	0.67	0.77	0.84
Trois-Rivières	65.5	63.5	61.8	36.5	44.1	47.4	0.56	0.69	0.77
Montréal	72.1	67.4	67.2	45.6	51.6	55.4	0.63	0.77	0.82
Ottawa–Hull	75	74.5	72.2	54.1	61.3	61.6	0.72	0.82	0.85
Kingston	73.9	72.0	65.6	50.1	58.3	56.7	0.68	0.81	0.86
Oshawa	79.3	74.3	72.8	48.8	57.9	60.5	0.62	0.78	0.83
Toronto	79.5	72.5	71.0	57.9	59.7	59.4	0.73	0.82	0.84
Hamilton	76.4	69.0	68.0	48.8	55.2	56.5	0.64	0.80	0.83
St. Catharines–Niagara	73.7	66.4	64.9	43.8	50.8	54.6	0.59	0.77	0.84
Kitchener	79.4	73.5	74.2	54.9	59.7	61.9	0.69	0.81	0.83
London	76.5	70.8	68.5	54.1	59.4	58.2	0.71	0.84	0.85
Windsor	67.3	65.5	68.9	42.8	49.6	54.9	0.64	0.76	0.80
Sudbury	71.1	67.0	59.8	42.6	53.1	53.0	0.60	0.79	0.89
Thunder Bay	75.0	67.0	61.6	49.3	55.0	54.9	0.66	0.82	0.89
Winnipeg	75.9	69.4	70.4	53.7	56.7	59.9	0.71	0.82	0.85
Regina	78.9	73.7	69.9	56.1	60.8	63.2	0.71	0.82	0.90
Saskatoon	77.3	72.4	70.6	53.7	57.8	60.5	0.69	0.80	0.86
Calgary	84.7	76.9	77.5	61.4	63.0	65.8	0.72	0.82	0.85
Edmonton	82.6	74.7	73.9	59.7	61.1	62.4	0.72	0.82	0.84
Abbotsford	73.6	68.4	68.1	42.8	50.2	55.1	0.58	0.73	0.81
Vancouver	76.2	70.4	66.8	53.1	56.9	57.2	0.70	0.81	0.86
Victoria	70.1	65.9	64.6	47.4	53.3	56.6	0.68	0.81	0.88
All CMAs	75.8	70.6	69.3	51.5	56.4	58.2	0.68	0.80	0.84
Non-CMAs	69.6	65.7	63.7	41.0	49.6	52.7	0.59	0.75	0.83
All Canada	73.2	68.8	67.3	47.2	53.9	56.2	0.64	78.3	83.5

a: Includes population 15+ only. Excludes non-permanent residents and institutional residents. Refers to labour force status in the week prior to the date of census collection.
Source: Census of Canada, 1981, 1991, 2001.

Table 2.6: Youth unemployment rates, non-students only[a]

	Aged 15-24				All persons			
	1981	1991	2001	2001 minus 1981	1981	1991	2001	2001 minus 1981
St. John's	19.1	24.2	18.1	-1.0	8.5	11.6	8.5	0.0
Halifax	12.3	14.1	12.2	-0.1	10.9	16.1	9.1	-1.8
Saint John	15.3	19.1	15.2	-0.1	6.6	9.2	5.9	-0.7
Chicoutimi–Jonquière	28.7	25.4	23.3	-5.4	8.2	11.4	8.3	0.1
Québec	17.6	15.7	10.4	-7.2	13.0	13.2	11.0	-2.0
Sherbrooke	16.5	18.1	11.0	-5.5	9.3	9.1	6.0	-3.3
Trois-Rivières	22.0	20.9	17.4	-4.6	9.4	10.9	5.8	-3.6
Montréal	13.2	17.4	10.9	-2.3	11.2	13.3	8.2	-3.0
Ottawa–Hull	12.0	11.7	10.2	-1.8	7.6	11.6	6.6	-1.0
Kingston	13.2	12.3	15.2	2.0	5.9	7.2	4.3	-1.6
Oshawa	11.5	15.5	12.1	0.6	6.3	7.4	5.6	-0.7
Toronto	6.3	13.2	9.8	3.5	5.7	8.5	4.8	-0.9
Hamilton	10.2	14.8	10.9	0.7	3.3	8.3	4.9	1.6
St. Catharines–Niagara	14.4	14.4	11.2	-3.2	4.9	8.9	4.7	-0.2
Kitchener	8.5	14.3	9.4	0.9	6.8	9.4	5.0	-1.8
London	10.8	13.3	11.8	1.0	4.8	8.9	4.5	-0.3
Windsor	18.5	16.1	11.7	-6.8	5.6	8.5	5.2	-0.4
Sudbury	16.0	15.1	17.6	1.6	11.0	11.7	5.3	-5.7
Thunder Bay	13.3	15.3	16.7	3.4	7.0	8.6	7.6	0.6
Winnipeg	8.3	13.9	9.5	1.2	6.3	9.5	7.5	1.2
Regina	7.0	12.3	10.2	3.2	4.7	8.6	4.8	0.1
Saskatoon	8.6	13.4	10.0	1.4	3.9	7.3	4.9	1.0
Calgary	4.5	12.2	8.0	3.5	5.3	8.7	5.3	0.0
Edmonton	5.4	12.0	9.3	3.9	2.8	7.9	4.1	1.3
Abbotsford	9.0	14.5	13.4	4.4	3.4	8.3	4.5	1.1
Vancouver	8.0	13.1	11.1	3.1	5.6	10.5	7.5	1.9
Victoria	8.9	11.2	12.8	3.9	4.5	9.2	6.2	1.7
All CMAs	10.1	14.4	10.7	0.6	5.5	9.3	5.5	0.0
Non-CMAs	15.5	17.5	15.4	-0.1	8.5	11.6	8.5	0.0
All Canada	12.3	15.5	12.4	0.1	6.7	10.1	6.5	-0.2

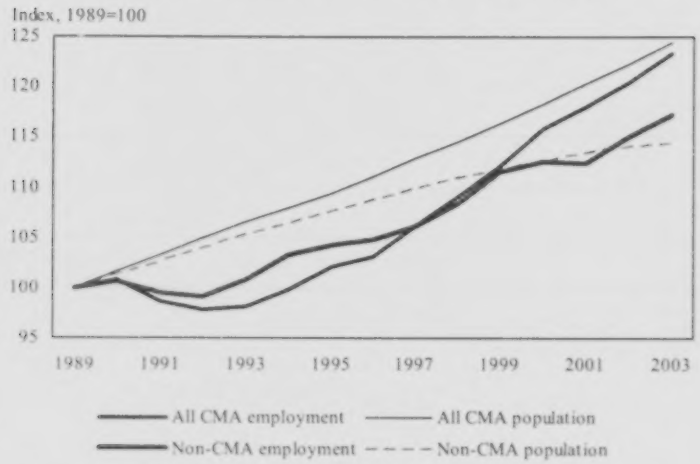
a: Includes population 15–24 only. Excludes non-permanent residents and institutional residents. Refers to labour force status in the week prior to the date of census collection.
Source: Census of Canada, 1981, 1991, 2001.

Table 2.7: Unemployment rates by educational attainment, 1981, 1991, 2001[a]

	High school or less				Some post secondary				University or more				Ratio: high school to university unemployment rate		
	1981	1991	2001	2001 minus 1981	1981	1991	2001	2001 minus 1981	1981	1991	2001	2001 minus 1981	1981	2001	2001 minus 1981
St. John's	14.7	20.9	14.1	-0.6	10.3	15.2	11.8	1.5	4.9	7.4	6.5	1.6	3.0	2.2	-0.8
Halifax	8.8	10.4	8.9	0.1	6.2	9.4	7.2	1.0	5.6	6.7	5	-0.6	1.6	1.8	0.2
Saint John	10.1	13.4	11.8	1.7	7.0	10.1	9.0	2.0	4.4	7.3	3.4	-1.0	2.3	3.5	1.2
Chicoutimi–Jonquière	17.0	14.4	15.1	-1.9	16.7	13.8	12.1	-4.6	5.9	6.7	6.1	0.2	2.9	2.5	-0.4
Québec	12.1	10.3	9.1	-3.0	11.3	9.4	6.6	-4.7	6.1	5.5	3.8	-2.3	2.0	2.4	0.4
Sherbrooke	11.7	12.4	8.5	-3.2	12.3	11.2	6.4	-5.9	7.6	5.6	4.4	-3.2	1.5	1.9	0.4
Trois-Rivières	14.2	15.9	12.7	-1.5	12	12.5	8.0	-4.0	9.3	6.5	3.9	-5.4	1.5	3.3	1.7
Montréal	9.6	13.4	9.2	-0.4	8.5	11.2	6.9	-1.6	5.3	7.2	5.0	-0.3	1.8	1.8	0.0
Ottawa–Hull	8.4	9.1	7.0	-1.4	6.2	7.2	5.6	-0.6	4.1	4.4	3.9	-0.2	2.0	1.8	-0.3
Kingston	8.1	8.6	8.1	0.0	6.5	7.5	7.3	0.8	5.3	4.6	4.1	-1.2	1.5	2.0	0.4
Oshawa	7.2	9.6	7.0	-0.2	6.0	8.4	5.9	-0.1	2.4	3.6	2.9	0.5	3.0	2.4	-0.6
Toronto	4.3	10.1	6.4	2.1	3.7	8.0	5.9	2.2	3.2	5.2	5.1	1.9	1.3	1.3	-0.1
Hamilton	6.3	10.3	6.6	0.3	5.0	8.6	5.4	0.4	3.6	4.8	4.1	0.5	1.8	1.6	-0.1
St. Catharines–Niagara	8.2	10.5	6.8	-1.4	6.6	9.2	5.7	-0.9	4.6	5.0	4.0	-0.6	1.8	1.7	-0.1
Kitchener	5.9	10.3	6.6	0.7	4.7	8.5	5.0	0.3	4.0	5.3	3.9	-0.1	1.5	1.7	0.2
London	6.7	10.0	7.8	1.1	6.5	8.1	6.5	0.0	4.6	5.2	4.7	0.1	1.5	1.7	0.2
Windsor	13.5	13.8	7.3	-6.2	10.2	11.1	5.7	-4.5	5.5	6.0	5.2	-0.3	2.5	1.4	-1.1
Sudbury	8.4	9.0	10.4	2.0	8.3	9.4	9.4	1.1	5.0	4.3	4.9	-0.1	1.7	2.1	0.4
Thunder Bay	7.5	11.2	11.3	3.8	6.7	9	8.1	1.4	3.9	4.9	4.7	0.8	1.9	2.4	0.5
Winnipeg	5.9	10.4	6.8	0.9	4.6	7.8	5.3	0.7	3.1	5.3	3.6	0.5	1.9	1.9	0.0
Regina	5.2	8.6	7.7	2.5	4.0	7.0	5.7	1.7	2.7	4.5	3.6	0.9	1.9	2.1	0.2
Saskatoon	6.6	10.3	7.8	1.2	5.9	8.5	6.8	0.9	4.5	5.4	4.7	0.2	1.5	1.7	0.2
Calgary	3.8	9.9	5.7	1.9	2.9	7.5	5	2.1	2.4	5.0	3.8	1.4	1.6	1.5	-0.1
Edmonton	4.4	9.8	6.2	1.8	3.6	7.9	5.4	1.8	2.4	5.1	3.9	1.5	1.8	1.6	-0.2
Abbotsford	6.6	12.6	10.6	4.0	5.1	8.5	6.9	1.8	2.4	6.8	4.4	2.0	2.8	2.4	-0.3
Vancouver	6.0	11.4	8.7	2.7	4.3	8.5	6.9	2.6	3.5	6.1	5.8	2.3	1.7	1.5	-0.2
Victoria	6.1	8.5	8.1	2.0	5.5	7.6	6.7	1.2	3.9	6.4	4.6	0.7	1.6	1.8	0.2
All CMAs	7.1	11.0	7.8	0.7	5.9	8.9	6.3	0.4	4.0	5.6	4.7	0.7	1.8	1.7	-0.1
Non-CMAs	10.1	13.2	11.1	1.0	8.1	10.7	8.3	0.2	3.8	4.7	4.0	0.2	2.7	2.8	0.1
All Canada	8.4	12.0	9.2	0.8	6.7	9.5	7.0	0.3	4.0	5.4	4.6	0.6	2.1	2.0	-0.1

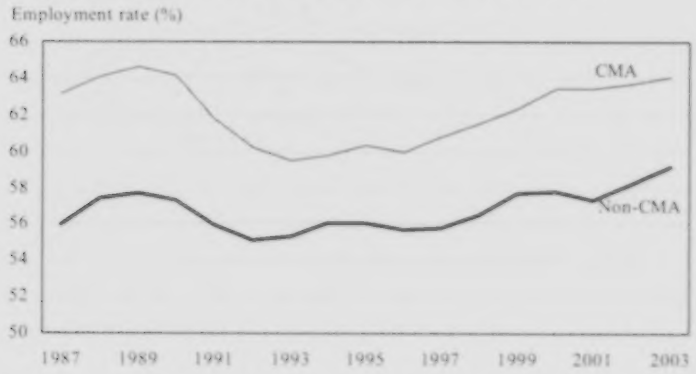
a: Includes population 15+ only. Excludes non-permanent residents and institutional residents. Refers to labour force status in the week prior to the date of census collection.
Source: Census of Canada, 1981, 1991, 2001.

Figure 2.1: Employment and population growth, 1989–2003



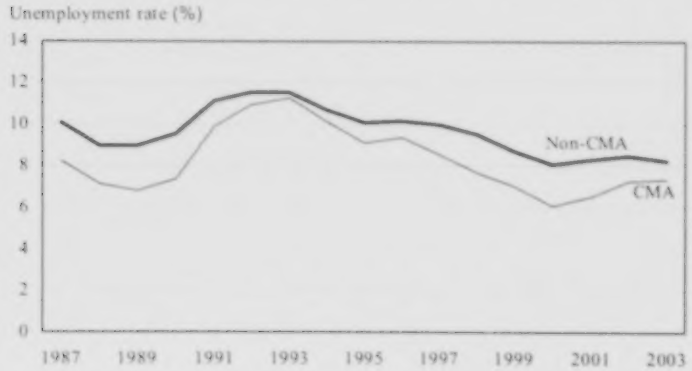
Source: Labour Force Survey, 1989–2003. Age 15+.

Figure 2.2: Employment rates, CMA and non-CMA, 1987–2003



Source: Labour Force Survey, 1989–2003. Age 15+

Figure 2.3: Unemployment rates, CMA and non-CMA, 1987–2003



Source: Labour Force Survey, 1989–2003. Age 15+

Chapter 3

Work activity

Two key aspects of job quality are earnings and hours. This chapter examines the pattern of full- versus part-time and full- versus part-year employment, while the next chapter discusses earnings in more detail.

The census asks a series of questions about work activity during the previous year. The questions on the number of weeks worked in the previous year, and whether the worker usually worked full- or part-time hours are particularly important for an understanding of labour markets. This section discusses the share of workers who usually worked full time (30 or more hours per week) and part time in the year, and whether the work was full-year (49 weeks or more) or part-year. Finally, these two concepts are combined in a discussion of full-year full-time work.

3.1 Workers were less likely to work mainly full-time hours in 2000 than in 1980

Table 3.1 shows the fraction of CMA and non-CMA workers grouped according to whether they worked mainly full-time hours in the previous year. Considering all workers residing in CMAs, 78.5% worked mainly full-time hours in 2000. This ranged from a low of 72.5% in Thunder Bay to a high of 80.2% in St. John's and Toronto. Non-CMA workers were, at 77.2%, only slightly less likely to work mainly full-time hours than CMA workers overall.

The share of workers in CMAs who worked mainly full-time fell from 81.6% in 1980, this fall being associated mainly with declining full-time hours among male workers. Among men in CMAs, 85.4% usually worked full time in 2000 compared to 89.4% in 1980. Among women workers, 70.9% worked mainly full time in 2000, virtually unchanged from 1980.

Between 1980 and 2000, most CMAs saw a decline of 2 to 5 percentage points in the share of jobs that were mostly full time. Smaller declines in this share were seen in Saint John (where it declined by just 1.2 points), Kitchener (down 0.6 points) and Windsor (down 0.4 points).

Patterns observed among CMA residents were echoed in the non-CMA region, indicating that the CMA region did not become relatively more concentrated in part-time work.

3.2 Workers were more likely to work full-year weeks in 2000 than in 1980

Table 3.2 shows the fraction of workers who worked full year (defined as 49 or more weeks in the year). In CMAs, 63.8% of workers worked full year in 2000 compared to 57.4% in non-CMAs. The share of workers working full year was individually higher in all 27 CMAs than in non-CMAs, indicating that full-year work is more prevalent in CMAs. Among CMAs, the share ranged from a low of 57.1% in Sudbury to a high of 68.5% in Kitchener.

At the same time as full-time work fell in CMA and non-CMA regions (particularly among men), the share of workers working full year rose dramatically. In all CMAs combined the share of workers who worked full year rose from 58.2% in 1980 to 63.8% in 2000. The increase was noted in all regions, but was largest in Windsor, Oshawa, and St. Catharines–Niagara, possibly reflecting low full-year employment in the auto industry in 1980.

This rise in full-year work was mainly associated with rising full-year work among women. The share of women working full year in CMAs rose to 61% in 2000 (up from 52% in 1980). Full-year work also rose among men, rising to 66.4% of workers in CMAs in 2000, up from 62.9% in 1980.

3.3 Full-year full-time and full-year part-time work now more common

One can combine these concepts of full-year and full-time work into a single measure to reflect the overall annual work hours for each worker. Workers are grouped into four categories: full-year full-time, part-year full-time, full-year part-time, and part-year part-time. Table 3.3 shows the shares of CMA and non-CMA populations represented by these four groups.

Full-year full-time work remained the standard work arrangement for the majority of workers in CMAs. Fully 56.1% of workers in CMAs worked full-year full-time hours in 2000. The second most popular work arrangement was part-year full-time, at 22.4% of workers. These workers would be either full-time seasonal workers, or those who only worked part of the year because of a work disruption. Finally part-year part-time comprised 13.8% of workers and full-year part-time comprised just 7.7% of workers in CMAs.

Comparing CMAs to non-CMAs, the largest difference was that non-CMA workers were more likely to work part-year full-time and less likely to work full-year full-time than CMA-based workers, possibly reflecting more seasonal work in non-CMAs.

Perhaps the most interesting fact from Table 3.3 is that workers were less likely to work part-year full-time in 2000 than they were in 1980. In CMAs and non-CMAs alike, more than 6 percent fewer workers worked part-year full-time. About half of these workers went to full-year part-time jobs, and another half went to full-year full-time jobs. The change was stronger among women, where the composition shifted more towards full-year full-time work.

Table 3.4 shows the share of workers working full-year full-time in CMAs in 1980, 1990, and 2000. The share of workers in this category ranged from a high of 59.5% in Ottawa–Hull, Oshawa, and Kitchener to lows of 49.4% in Sudbury and 49.8% in Abbotsford.

Virtually all CMAs saw an increase in the share of workers working full-year full-time between 1980 and 2000. The share grew 13.4 points in Windsor, 8.2 points in Oshawa, 6.8 points in Calgary, and 6.4 points in St. Catharines–Niagara. It rose more than 4 points in 8 other CMAs and more than 2 points in 9 other CMAs. The share of male workers working full-year full-time rose in most CMAs, and the share of female workers working full-year full-time rose in all CMAs.

Table 3.1: Percent of workers who worked mainly full-time hours, 1980, 1990, 2000[a]

	Women (%)				Men (%)				All persons (%)			
	1980	1990	2000	2000 minus 1980	1980	1990	2000	2000 minus 1980	1980	1990	2000	2000 minus 1980
St. John's	75.1	75.3	75.0	-0.1	89.5	88.8	85.2	-4.3	83.2	82.4	80.2	-3.0
Halifax	71.4	71.8	71.5	0.1	88.8	88.0	85.3	-3.5	81.4	80.5	78.6	-2.8
Saint John	68.1	68.8	70.3	2.2	87.8	87.9	86.2	-1.6	79.7	79.2	78.5	-1.2
Chicoutimi–Jonquière	69.2	65.7	64.8	-4.4	89.9	88.1	86.5	-3.4	82.5	78.9	77.1	-5.4
Québec	75.1	71.3	71.9	-3.2	89.3	87.6	85.6	-3.7	83.3	80.1	79.1	-4.2
Sherbrooke	71.7	67.5	70.0	-1.7	88.2	86.8	85.3	-2.9	80.6	77.6	78.0	-2.6
Trois-Rivières	70.7	65.3	65.8	-4.9	88.4	88.9	85.5	-2.9	81.1	78.5	76.5	-4.6
Montréal	75.9	74.8	73.7	-2.2	90.5	88.6	85.9	-4.6	84.3	82.3	80.1	-4.2
Ottawa–Hull	73.6	74.7	74.1	0.5	88.6	87.6	84.9	-3.7	81.9	81.5	79.7	-2.2
Kingston	66.2	67.3	65.7	-0.5	88.9	86.3	82.9	-6.0	79.8	77.5	74.8	-5.0
Oshawa	67.1	69.7	69.7	2.6	91.2	89.3	86.9	-4.3	81.2	80.4	78.8	-2.4
Toronto	74.6	76.0	74.1	-0.5	89.5	88.6	85.9	-3.6	82.8	82.7	80.2	-2.6
Hamilton	64.2	67.1	67.4	3.2	89.8	87.7	85.6	-4.2	79.0	78.2	76.9	-2.1
St. Catharines–Niagara	60.8	63.2	65.1	4.3	88.8	87.5	84.4	-4.4	77.3	76.3	75.2	-2.1
Kitchener	66.1	68.3	68.8	2.7	88.7	87.1	86.8	-1.9	78.9	78.4	78.3	-0.6
London	66.9	67.9	66.4	-0.5	87.7	86.2	83.3	-4.4	78.3	77.4	75.1	-3.2
Windsor	65.2	66.2	67.4	2.2	87.1	85.6	86.1	-1.0	77.9	76.9	77.5	-0.4
Sudbury	63.0	65.2	65.6	2.6	89.9	86.6	83.2	-6.7	79.2	76.9	74.7	-4.5
Thunder Bay	61.1	62.6	61.3	0.2	89.5	86.3	82.6	-6.9	77.7	75.5	72.5	-5.2
Winnipeg	68.3	69.7	69.9	1.6	88.7	87.0	85.0	-3.7	79.5	78.9	77.8	-1.7
Regina	68.1	69.3	68.9	0.8	88.5	86.2	82.8	-5.7	79.4	78.1	75.9	-3.5
Saskatoon	67.9	65.9	65.9	-2.0	89.1	86.5	84.7	-4.4	79.4	76.6	75.5	-3.9
Calgary	71.2	71.7	70.0	-1.2	90.9	88.5	86.7	-4.2	82.5	80.7	78.9	-3.6
Edmonton	70.4	70.1	67.8	-2.6	90.6	88.1	86.6	-4.0	81.8	79.8	77.8	-4.0
Abbotsford	57.6	61.8	60.9	3.3	87.9	88.2	84.4	-3.5	75.5	76.5	73.3	-2.2
Vancouver	67.4	70.4	67.9	0.5	87.7	87.1	83.2	-4.5	78.9	79.4	75.9	-3.0
Victoria	63.0	66.5	64.9	1.9	86.9	85.9	80.9	-6.0	76.4	76.8	73.0	-3.4
All CMAs	71.4	72.0	70.9	-0.5	89.4	87.9	85.4	-4.0	81.6	80.5	78.5	-3.1
Non-CMAs	66.4	68.0	67.4	1.0	88.9	88.2	85.5	-3.4	80.2	79.4	77.2	-3.0
All Canada	69.4	70.5	69.6	0.2	89.2	88.0	85.4	-3.8	81.0	80.1	78.0	-3.0

a: Includes population 15+ with positive weeks worked in reference year. Excludes non-permanent residents and institutional residents. Refers to work activity in the year prior to the census.

Source: Census of Canada, 1981, 1991, 2001.

Table 3.2: Percent of workers who worked full year[a], 1980, 1990, 2000[b]

	Women (%)				Men (%)				All persons (%)			
	1980	1990	2000	2000 minus 1980	1980	1990	2000	2000 minus 1980	1980	1990	2000	2000 minus 1980
St. John's	51.7	55.4	62.7	11.0	60.1	61.1	62.9	2.8	56.4	58.4	62.8	6.4
Halifax	52.5	60.4	62.8	10.3	64.8	68.1	67.5	2.7	59.6	64.6	65.2	5.6
Saint John	51.6	57.7	61.4	9.8	62.0	64.7	63.4	1.4	57.7	61.5	62.4	4.7
Chicoutimi–Jonquière	47.7	51.5	55.6	7.9	60.5	63.6	62.6	2.1	55.9	58.6	59.5	3.6
Québec	53.2	58.6	61.0	7.8	62.9	65.4	64.9	2.0	58.9	62.3	63.1	4.2
Sherbrooke	50.4	53.6	58.2	7.8	58.8	58.9	61.8	3.0	54.9	56.4	60.0	5.1
Trois-Rivières	45.4	54.0	56.8	11.4	58.9	60.2	61.9	3.0	53.4	57.5	59.5	6.1
Montréal	52.4	58.4	60.1	7.7	63.2	64.8	65.3	2.1	58.6	61.8	62.8	4.2
Ottawa–Hull	55.3	62.1	64.2	8.9	67.7	68.8	69.1	1.4	62.1	65.6	66.8	4.7
Kingston	51.8	59.9	61.4	9.6	62.4	66.3	65.0	2.6	58.1	63.3	63.3	5.2
Oshawa	49.5	60.7	63.3	13.8	62.4	69.6	71.7	9.3	57.0	65.5	67.7	10.7
Toronto	56.0	62.9	61.9	5.9	66.1	67.8	67.9	1.8	61.6	65.5	65.1	3.5
Hamilton	52.2	60.8	63.7	11.5	65.7	64.4	70.1	4.4	60.1	62.8	67.1	7.0
St. Catharines–Niagara	45.5	54.4	61.1	15.6	60.5	62.8	67.2	6.7	54.4	59.0	64.3	9.9
Kitchener	53.4	61.5	64.4	11.0	67.1	67.5	72.3	5.2	61.2	64.7	68.5	7.3
London	53.1	61.2	63.3	10.2	64.1	67.2	68.3	4.2	59.2	64.1	65.9	6.7
Windsor	51.0	59.5	64.0	13.0	52.5	63.3	70.8	18.3	51.9	61.6	67.7	15.8
Sudbury	45.2	53.4	58.4	13.2	61.3	61.8	59.8	-1.5	54.9	58.0	59.1	4.2
Thunder Bay	46.6	56.5	60.2	13.6	57.2	57.0	62.3	5.1	52.8	56.8	61.3	8.5
Winnipeg	51.1	59.9	64.4	13.3	64.2	65.8	68.8	4.6	58.3	63.0	66.7	8.4
Regina	51.2	60.5	64.7	13.5	63.4	65.6	67.5	4.1	57.9	63.2	66.1	8.2
Saskatoon	46.7	56.1	59.6	12.9	60.0	62.7	65.8	5.8	53.9	59.5	62.8	8.9
Calgary	47.0	56.7	59.7	12.7	58.8	64.2	66.3	7.5	53.8	60.7	63.2	9.4
Edmonton	48.4	56.1	59.2	10.8	58.8	62.3	64.3	5.5	54.3	59.4	61.9	7.6
Abbotsford	41.6	48.1	55.1	13.5	59.5	60.0	63.5	4.0	52.2	54.7	59.6	7.4
Vancouver	49.0	55.4	57.2	8.2	58.9	61.7	62.4	3.5	54.6	58.8	59.9	5.3
Victoria	47.0	54.4	58.2	11.2	58.5	61.4	62.4	3.9	53.5	58.1	60.3	6.8
All CMAs	52.0	59.1	61.0	9.0	62.9	65.2	66.4	3.5	58.2	62.4	63.8	5.6
Non-CMAs	43.8	51.3	55.9	12.1	55.9	56.4	58.7	2.8	51.2	54.2	57.4	6.2
All Canada	48.8	56.2	59.1	10.3	59.9	61.6	63.4	3.5	55.3	59.2	61.4	6.1

a: 49 or more weeks of employment in the reference year.
b: Includes population 15+ with positive weeks worked in reference year. Excludes non-permanent residents and institutional residents. Refers to work activity in the year prior to the census.
Source: Census of Canada, 1981, 1991, 2001.

Table 3.3: Percent of workers by work activity[a], 1980, 1990, 2000[b]

	Full-year full-time		Full-year part-time		Part-year full-time		Part-year part-time	
	2000	2000 minus 1980	2000	2000 minus 1980	2000	2000 minus 1980	2000	2000 minus 1980
CMA	56.1	3.3	7.7	2.3	22.4	-6.4	13.8	0.8
Non-CMA	49.5	3.6	7.9	2.6	27.7	-6.6	14.9	0.4
All Canada	53.6	3.7	7.8	2.4	24.4	-6.7	14.2	0.6
Women								
CMA	49.7	6.5	11.3	2.5	21.2	-7.0	17.8	-2.0
Non-CMA	43.4	9.1	12.5	2.9	24.0	-8.1	20.1	-4.0
All Canada	47.4	7.7	11.7	2.6	22.2	-7.5	18.6	-2.8
Men								
CMA	61.9	1.7	4.5	1.8	23.4	-5.8	10.2	2.3
Non-CMA	54.7	1.5	4.0	1.4	30.8	-4.9	10.5	2.1
All Canada	59.1	2.0	4.3	1.6	26.3	-5.7	10.3	2.2

a: Full-year full-time: 49 or more weeks of employment in the reference year and worked mostly full-time hours.
Full-year part-time: 49 or more weeks of employment in the reference year and worked mostly part-time hours.
Part-year full-time: 48 or fewer weeks of employment in the reference year and worked mostly full-time hours.
Part-year part-time: 48 or fewer weeks of employment in the reference year and worked mostly part-time hours.

b: Includes population 15+ with positive weeks worked in reference year. Excludes non-permanent residents and institutional residents. Refers to work activity in the year prior to the census.

Source: Census of Canada, 1981, 1991, 2001.

Table 3.4: Percent of workers who worked full-year and full-time, 1980, 1990, 2000[a]

	Women (%)				Men (%)				All persons (%)			
	1980	1990	2000	2000 minus 1980	1980	1990	2000	2000 minus 1980	1980	1990	2000	2000 minus 1980
St. John's	44.4	47.2	53.2	8.8	58.1	58.4	58.7	0.6	52.2	53.1	56.0	3.8
Halifax	43.7	49.5	51.2	7.5	61.8	64.4	62.8	1.0	54.2	57.6	57.2	3.0
Saint John	41.5	45.5	49.6	8.1	58.5	61.5	59.0	0.5	51.5	54.2	54.4	2.9
Chicoutimi–Jonquière	39.2	40.1	42.0	2.8	57.9	60.5	58.2	0.3	51.2	52.1	51.2	0.0
Québec	45.4	47.3	49.5	4.1	60.2	61.6	60.2	0.0	54.0	55.1	55.1	1.1
Sherbrooke	41.2	41.0	46.1	4.9	55.6	55.1	56.9	1.3	49.0	48.4	51.7	2.7
Trois-Rivières	37.1	40.5	43.5	6.4	56.1	57.1	57.2	1.1	48.3	49.8	51.0	2.7
Montréal	45.0	49.0	50.0	5.0	60.6	61.4	60.8	0.2	54.0	55.7	55.7	1.7
Ottawa–Hull	47.4	52.8	54.4	7.0	64.5	65.1	64.3	-0.2	56.9	59.3	59.5	2.6
Kingston	41.1	46.8	46.9	5.8	59.5	62.0	59.5	0.0	52.1	54.9	53.6	1.5
Oshawa	39.0	48.3	50.4	11.4	60.1	66.3	67.5	7.4	51.3	58.1	59.5	8.2
Toronto	47.9	53.7	52.5	4.6	63.3	64.6	63.9	0.6	56.4	59.5	58.4	2.0
Hamilton	40.1	47.0	49.3	9.2	63.0	60.7	65.4	2.4	53.4	54.4	57.7	4.3
St. Catharines–Niagara	33.5	40.3	45.7	12.2	57.8	59.5	61.9	4.1	47.8	50.7	54.2	6.4
Kitchener	40.9	47.8	50.5	9.6	63.4	63.3	67.7	4.3	53.6	56.1	59.5	5.9
London	42.0	47.9	48.6	6.6	60.6	62.5	62.7	2.1	52.2	55.5	55.9	3.7
Windsor	39.4	45.1	49.6	10.2	49.1	58.3	65.9	16.8	45.0	52.4	58.4	13.4
Sudbury	34.9	41.6	44.1	9.2	59.1	58.3	54.3	-4.8	49.5	50.7	49.4	-0.1
Thunder Bay	34.4	41.8	43.8	9.4	54.9	52.9	56.6	1.7	46.4	47.8	50.5	4.1
Winnipeg	41.4	47.7	51.8	10.4	61.4	61.7	63.8	2.4	52.4	55.1	58.1	5.7
Regina	42.1	48.5	51.2	9.1	60.4	61.5	61.9	1.5	52.2	55.3	56.6	4.4
Saskatoon	37.8	43.5	45.8	8.0	57.6	58.9	61.0	3.4	48.6	51.5	53.5	4.9
Calgary	39.2	46.6	48.8	9.6	56.8	61.3	62.6	5.8	49.3	54.5	56.1	6.8
Edmonton	39.8	45.4	46.7	6.9	56.7	59.3	60.4	3.7	49.3	52.9	54.0	4.7
Abbotsford	29.9	35.5	39.6	9.7	56.7	57.4	58.8	2.1	45.7	47.7	49.8	4.1
Vancouver	39.3	45.2	45.6	6.3	55.9	58.5	57.7	1.8	48.7	52.4	51.9	3.2
Victoria	35.9	42.8	44.7	8.8	55.0	57.8	56.3	1.3	46.6	50.8	50.6	4.0
All CMAs	43.2	48.6	49.7	6.5	60.2	61.7	61.9	1.7	52.8	55.6	56.1	3.3
Non-CMAs	34.3	40.1	43.4	9.1	53.2	53.5	54.7	1.5	45.9	47.7	49.5	3.6
All Canada	39.7	45.4	47.4	7.7	57.1	58.4	59.1	2.0	49.9	52.5	53.6	3.7

a: Includes population 15+ with positive weeks worked in reference year. Excludes non-permanent residents and institutional residents. Refers to work activity in the year prior to the census.

Source: Census of Canada, 1981, 1991, 2001.

Chapter 4

Earnings

This chapter examines earnings and earnings growth among CMAs.[15] The data examined are annual earnings from the census. When studying annual earnings it is common to look only at full-year full-time workers to prevent part-year or part-time workers from biasing annual earnings downward. This practice is followed in this section except where otherwise noted. A full-year full-time worker is one who usually worked 30 or more hours in 49 or more weeks during the census reference year.

This section examines earnings across several dimensions, beginning with median earnings and earnings at the 10th and 90th percentiles. These are examined for all persons, and for men and women separately. Following this, the chapter profiles earnings of young workers, and earnings among high- and low-educated workers. One area not examined is the earnings of immigrants. This is a subject that is covered in depth elsewhere, and interested readers are encouraged to look at the third volume in this series on *Trends and Conditions in CMAs* entitled "Immigrants in Canada's Census Metropolitan Areas" (Schellenberg, 2004).

4.1 The growth of earnings differed across Canadian CMAs

In 2000, the median full-year full-time worker residing in a CMA earned $38,000; however, median annual earnings varied substantially among CMAs, ranging from a high of $42,200 per year in Oshawa to a low of $30,400 in Sherbrooke (Table 4.1). Median annual earnings in non-CMAs was $32,000.

From 1980 to 2000, real median earnings of full-year full-time workers remained steady in CMAs. However, earnings growth varied among CMAs. Median earnings of full-year full-time workers rose by the most in Kitchener (7.3%), Ottawa–Hull (6.2%) and Toronto (5.2%), and rose by between 1 and 5 percent in four other CMAs. At the same time median earnings fell in many CMAs, while in Sherbrooke, St. Catharines–Niagara, Sudbury, Saskatoon, and Abbotsford they fell even faster than in non-CMAs. Earnings declined by 7.7% in non-CMAs.

Earnings changes over the 1980 to 2000 period differed across regional lines. Median earnings fell in all Quebec CMAs, CMAs in Northern Ontario (patterns were mixed in the rest of Ontario), and all CMAs west of Ontario. While Alberta CMAs had among the highest median earnings in 1980, followed by British Columbia and Ontario CMAs, Ontario had the highest earnings in 2000. Between 1980 and 2000, the earnings of residents in Manitoba and Saskatchewan CMAs fell behind those of Atlantic CMAs.

Full-year full-time working women made substantial gains in annual earnings in most CMAs through the last two decades. Earnings of full-year full-time women rose by more than 20% in seven CMAs. However, real earnings declined in virtually all CMAs for men, and men made substantial gains only in Chicoutimi–Jonquière, Windsor, Oshawa, and Kitchener (Table 4.2).

15. Earnings include wages, salaries, and self-employment earnings. In this section, earnings are converted from nominal to real 2000 dollars using the Consumer Price Index (CPI). CMA-specific CPIs are used when these are available, and provincial CPIs are used otherwise. As a result, changes in earnings reported in this study reflect real changes in purchasing power in the CMAs. However, figures are not adjusted for differences in purchasing power across CMAs. Readers should note that CMAs and the non-CMA regions have different costs of living which are not accounted for in this section.

4.2 Earnings fell for low-income workers and rose for high-income workers in most CMAs

While median earnings among full-year full-time workers rose in some CMAs and fell in others, earnings measured at the 10th percentile fell in all CMAs (Table 4.3). In many CMAs this fall was quite substantial, with earnings at the 10th percentile falling 20 percent or more in 15 CMAs. A fall of this magnitude typically represents a decline of $3,000 to $4,000 from total annual earnings of less than $20,000. In fact, earnings at the 10th percentile fell by at least 15% in all CMAs, with the exceptions of Kitchener, London and Windsor. Most of this decline occurred across the 1980s, with earnings at the 10th percentile remaining stable in most CMAs in the 1990s.

In contrast to falling earnings at the bottom of the earnings distribution, earnings of top earners rose over the period in most CMAs. Between 1980 and 2000 earnings at the 90th percentile rose more than 15% in Oshawa, Kitchener, Saint John, Toronto, and Windsor, and more than 10% in four other CMAs. Earnings at the 90th percentile fell between 1980 and 2000 only in four CMAs: Québec, Sherbrooke, Saskatoon and Abbotsford.

Earnings fell for low earners whether they were men or women, but they fell more for men (Table 4.4). Among full-year full-time workers at the 10th percentile of annual earnings in CMAs, earnings fell by 14.2% among women and 26.7% among men between 1980 and 2000. This converts to a $2,100 drop for women and $5,800 for men. The size of the earnings drop monotonically decreased as one moves to higher earnings percentiles. Hence, earnings changed much less at the 25th percentile for men and women, and rose at the 75th percentile and higher. At the 90th percentile, annual earnings rose by 27.8% (up $13,400) among women and 10.7% (up $8,200) among men. Earnings measured at the 10th percentile fell more for non-CMA than CMA workers, and earnings measured at the 90th percentile rose less for non-CMA workers.[16]

4.3 The earnings gap between the younger and older rose in all CMAs

One important labour market development which has received some attention in recent years is the rising earnings gap between older and younger workers. Previous research has identified an important decline in the earnings of young workers (and young men in particular), which began in the 1980s and has persisted through the early 2000s. Are all CMAs experiencing the same decline in relative earnings of young workers?

Table 4.5 presents median annual earnings of full-year full-time workers from the age groups 25 to 34 and 45 to 54. Persons aged 25 to 34 saw their annual earnings decline in real terms by 12% from $38,000 in 1980 to $33,500 in 2000. Over the same time, earnings of workers aged 45 to 54 saw only a 1.4% decline in annual earnings.

The decline in annual earnings of young workers appears more concentrated in non-CMAs. In non-CMAs, earnings of those aged 25 to 34 fell by 18.5% compared to just 9.2% for those living in CMAs. Earnings changes for workers aged 45 to 54 were similar in CMAs and non-CMAs.

However, the earnings of young workers fared worse in some CMAs than others. Fully eight CMAs saw youth earnings decline more than in the non-CMA sector (Regina, St. Catharines–Niagara, Trois-Rivières, Québec, Saskatoon, Abbotsford, Chicoutimi–Jonquière and Sudbury).

16. In some ways, examining only full-year full-time workers tends to underestimate the amount of decline at the bottom of the earnings distribution, since it excludes part-year and part-time workers. When part-year and part-time workers are added to the mix, and weekly rather than annual earnings are examined, results for the top of the distribution are left mostly unchanged, but earnings fall more at the 10th percentile.

As with youth employment rates, youth earnings declines were largely driven by declines among men, especially in CMAs. In CMAs, young men's earnings fell by 12.0% compared to a marginal 0.4% increase for young women (Table 4.6). As on other measures there was substantial heterogeneity among CMAs in earnings declines of young men. Young men's earnings fell by more than 20% in eight CMAs (St. Catharines–Niagara, Winnipeg, Québec, Abbotsford, Saskatoon, Trois-Rivières, St. John's, and Regina), but fell less than 5% in Kitchener and rose marginally in Windsor. There was also substantial heterogeneity in the earnings change of young women, rising more than 10% in Oshawa and Kitchener, but declining more than 10% in Chicoutimi–Jonquière, Québec and Sherbrooke.

Young women's earnings also declined by 8.4% in non-CMAs. Young men's earnings fell by about equal amounts in non-CMAs and CMAs. These facts together indicate that it was the relative decline in earnings of young women in non-CMAs that led to the faster decline in earnings in non-CMAs noted above.

4.4 The earnings gap between the high- and low-educated did not increase in CMAs

How have the earnings of high- and low-educated workers differed? In today's technology based economy, one might imagine that a demand for high-skilled workers would drive up the earnings of university graduates relative to other less educated workers. At the same time, declining unionization rates and the diminishing importance of the manufacturing and resources sectors might signal a decline in wages for those less educated workers who traditionally might have taken these types of jobs. Several studies have examined these issues in recent years and discovered that, in fact, the relative earnings of high- and low-educated workers has remained remarkably stable in past decades. Some studies argue that this is likely the result of supply and demand forces remaining in balance, as an increasing supply of highly educated workers offsets an increasing demand for these same workers (and similarly a decreasing demand for low-skilled workers is offset by a decreasing supply).[17]

How have the earnings of high- and low-educated workers developed in CMAs? Table 4.7 shows median annual earnings of full-year full-time workers according to whether they have a university degree or (at most) a high school diploma. A number of interesting results can be drawn from this table. First, in 2000 university graduates living in CMAs earned on average 1.73 times that of high school graduates, amounting to an extra $22,000 in annual earnings in that year. However, this premium differed widely across CMAs, ranging from low values of 1.41 in Thunder Bay, and 1.49 in Oshawa and Windsor to high values of over 1.8 in St. John's, Sherbrooke, Trois-Rivieres, Ottawa–Hull and Calgary.

Second, earnings fell for both low- and high-educated workers in nearly all CMAs between 1980 and 2000. In all CMAs combined, earnings for a worker with high school or less education fell by 9% between 1980 and 2000, while earnings for a worker with a university degree or more fell by 7.5%. The steady median earnings for all CMAs observed in Table 4.1 requires some explanation in light of these declines among both university and high school educated workers. In fact, it is the shift towards more educated workers in the population that has partially propped up median earnings. Taking Toronto as an example, earnings fell by 5.2% for workers with a high school education or less, and by 5.8% for workers with a university degree or more; however, a compositional shift in the population of Toronto towards more educated workers resulted in an increase in median earnings of 5.2%.

17. See, for example, R. Morissette, Y. Ostrovsky, and G. Picot, "Relative Wage Patterns among the Highly Educated in a Knowledge-based Economy." Statistics Canada Cat. No. 11F0019MIE-No.232.

Finally, equal sized declines in annual earnings among more and less educated workers has meant that the premium associated with having a university degree has remained more or less constant since 1980 in many CMAs. However, the education premium has risen sharply in some CMAs and fallen in others. The largest rises were seen in Saint John, Sudbury, and Abbotsford, where the premium associated with having a university degree rose by more than 20 percentage points. In each of these cases the rising premium was driven by a large collapse in the earnings of low-educated workers that was not offset by a similar collapse in the earnings of university graduates. The premium fell most in Québec, Sherbrooke, and Trois-Rivières, driven by declines in the annual earnings of university graduates, and in Kitchener, where earnings of low-educated workers rose modestly while earnings of university graduates fell slightly.

Table 4.1: Median annual earnings of full-year full-time workers (constant-2000 dollars)[a]

	1980	1990	2000	Percent change 1980 to 2000
St. John's	32,400	34,000	34,000	4.9
Halifax	33,700	36,200	35,000	4.0
Saint John	33,600	35,000	33,000	-1.9
Chicoutimi–Jonquière	40,700	39,600	38,800	-4.8
Québec	37,500	35,400	34,900	-6.8
Sherbrooke	33,400	31,600	30,400	-8.9
Trois-Rivières	36,400	35,600	33,800	-7.2
Montréal	35,900	35,100	35,000	-2.6
Ottawa–Hull	39,600	41,800	42,000	6.2
Kingston	37,400	36,200	37,100	-0.9
Oshawa	42,100	42,300	42,200	0.4
Toronto	38,000	38,200	40,000	5.2
Hamilton	40,600	38,600	40,000	-1.6
St. Catharines–Niagara	39,800	36,200	35,800	-10.1
Kitchener	35,400	36,200	38,000	7.3
London	36,500	36,200	37,800	3.3
Windsor	41,200	38,600	42,000	1.9
Sudbury	42,300	42,300	38,600	-8.8
Thunder Bay	41,000	39,400	40,000	-2.4
Winnipeg	34,900	35,300	33,000	-5.3
Regina	37,500	36,400	35,300	-5.9
Saskatoon	37,000	34,500	33,300	-10.0
Calgary	41,000	38,900	39,000	-4.9
Edmonton	39,000	36,900	36,800	-5.7
Abbotsford	40,200	36,800	36,000	-10.5
Vancouver	40,800	37,300	39,400	-3.4
Victoria	38,100	35,400	38,000	-0.3
All CMAs	38,000	37,000	38,000	0.0
Non-CMAs	34,700	32,700	32,000	-7.7
All Canada	36,800	36,100	36,000	-2.1

a: Population aged 15+ only. Full-year full-time workers worked 49 or more weeks at mostly full-time hours. Earnings include wages, salaries, and self-employment earnings. Earnings are converted from nominal to real 2000 dollars using the Consumer Price Index (CPI). CMA-specific CPIs are used when these are available, and provincial CPIs are used otherwise.

Source: Census of Canada, 1981, 1991, 2001.

Table 4.2: Median annual earnings of full-year full-time workers, women and men (constant-2000 dollars)[a]

	Women				Men			
	1980	1990	2000	Percent change 1980 to 2000	1980	1990	2000	Percent change 1980 to 2000
St. John's	25,900	27,300	29,400	13.4	39,000	40,100	39,000	-0.2
Halifax	24,800	27,800	30,000	20.8	40,000	42,300	40,000	0.1
Saint John	23,600	25,300	26,700	13.3	40,200	42,200	40,000	-0.4
Chicoutimi–Jonquière	27,900	27,200	28,400	1.7	42,900	45,900	44,400	3.5
Québec	28,600	29,200	30,000	4.8	42,800	40,900	40,000	-6.6
Sherbrooke	26,200	25,600	27,000	3.1	38,200	36,300	35,000	-8.4
Trois-Rivières	24,600	25,300	27,300	10.9	41,800	42,300	40,000	-4.3
Montréal	27,900	29,100	30,000	7.4	41,100	40,000	39,000	-5.1
Ottawa–Hull	30,900	35,900	38,000	23.0	46,200	48,300	47,000	1.8
Kingston	27,000	30,200	32,000	18.7	42,500	42,300	41,000	-3.5
Oshawa	28,300	31,400	34,600	22.1	47,300	48,300	50,000	5.8
Toronto	29,000	32,500	35,000	20.6	45,000	44,500	44,000	-2.2
Hamilton	26,600	30,200	32,000	20.5	46,500	45,900	46,200	-0.6
St. Catharines–Niagara	24,300	26,600	29,000	19.1	44,300	43,500	42,000	-5.1
Kitchener	24,500	27,500	30,000	22.6	41,300	41,900	44,000	6.6
London	27,400	29,000	31,600	15.4	43,200	42,300	42,300	-2.0
Windsor	28,500	29,800	32,000	12.1	47,300	45,800	50,000	5.7
Sudbury	27,800	30,200	32,000	15.0	45,900	50,200	45,000	-2.0
Thunder Bay	26,300	29,800	32,000	21.9	46,500	45,900	45,000	-3.3
Winnipeg	25,800	28,400	28,300	9.4	41,100	40,300	37,400	-8.8
Regina	28,200	30,100	31,000	9.6	43,900	42,700	40,400	-8.0
Saskatoon	27,500	27,100	28,000	1.8	42,400	40,300	39,000	-8.1
Calgary	29,800	31,800	32,000	7.5	48,700	45,800	43,700	-10.3
Edmonton	28,400	29,500	30,000	5.7	46,600	43,000	42,200	-9.4
Abbotsford	27,900	28,400	30,000	7.3	44,700	42,900	40,000	-10.5
Vancouver	30,200	30,900	35,000	15.7	47,200	44,400	43,000	-8.9
Victoria	29,600	29,300	34,700	17.2	44,500	41,400	41,600	-6.5
All CMAs	28,100	30,300	32,000	13.8	44,100	43,200	42,000	-4.7
Non-CMAs	25,000	24,500	26,600	6.1	39,000	37,700	37,800	-2.9
All Canada	27,100	29,100	30,000	10.8	42,700	41,800	40,000	-6.4

a. Population aged 15+ only. Full-year full-time workers worked 49 or more weeks at mostly full-time hours. Earnings include wages, salaries, and self-employment earnings. Earnings are converted from nominal to real 2000 dollars using the Consumer Price Index (CPI). CMA-specific CPIs are used when these are available, and provincial CPIs are used otherwise.

Source: Census of Canada, 1981, 1991, 2001.

Table 4.3: Annual earnings of full-year full-time workers, at the 10th and 90th percentiles (constant-2000 dollars)[a]

	10th percentile				90th percentile			
	1980	1990	2000	Percent change 1980 to 2000	1980	1990	2000	Percent change 1980 to 2000
St. John's	16,200	14,600	13,000	-19.8	62,600	65,600	68,000	8.5
Halifax	16,900	15,700	13,500	-20.0	60,800	65,200	68,700	13.0
Saint John	16,800	14,500	11,600	-31.1	59,700	63,000	70,000	17.3
Chicoutimi–Jonquière	17,100	14,500	14,500	-15.4	64,300	64,800	67,000	4.2
Québec	18,200	15,700	14,800	-18.4	68,500	64,200	65,000	-5.1
Sherbrooke	16,400	12,300	12,200	-25.5	64,300	60,400	60,000	-6.7
Trois-Rivières	16,200	12,800	12,400	-23.4	64,300	64,100	65,000	1.0
Montréal	17,300	14,500	13,600	-21.7	65,600	66,600	70,000	6.8
Ottawa–Hull	19,700	18,400	16,200	-18.1	75,000	76,900	84,000	12.0
Kingston	15,900	13,200	12,500	-21.6	64,200	66,400	70,000	9.1
Oshawa	19,300	18,100	16,300	-15.3	66,700	72,400	80,000	20.0
Toronto	18,400	17,300	15,000	-18.5	71,800	74,600	83,500	16.3
Hamilton	17,700	15,700	15,000	-15.3	66,500	70,400	75,300	13.3
St. Catharines–Niagara	15,800	13,200	13,000	-17.6	66,400	66,400	70,000	5.4
Kitchener	17,500	15,600	16,000	-8.6	62,100	66,400	74,000	19.1
London	17,000	15,000	15,000	-11.9	66,400	67,600	71,000	6.9
Windsor	16,700	14,500	15,000	-10.4	70,800	68,300	82,400	16.3
Sudbury	17,800	14,500	12,500	-29.9	66,400	72,400	74,000	11.5
Thunder Bay	18,100	14,800	15,000	-17.0	64,600	69,000	70,000	8.4
Winnipeg	17,400	14,300	13,200	-24.2	62,200	63,000	65,000	4.5
Regina	19,300	14,400	14,000	-27.4	65,200	67,000	69,000	5.8
Saskatoon	18,600	12,300	12,000	-35.5	65,500	64,100	65,000	-0.7
Calgary	20,200	15,300	14,600	-27.8	77,900	79,300	85,000	9.1
Edmonton	19,600	13,800	13,000	-33.8	72,000	67,700	74,000	2.7
Abbotsford	15,600	14,700	12,000	-23.2	66,700	66,200	65,000	-2.6
Vancouver	19,400	14,900	14,600	-25.0	72,200	73,400	76,000	5.3
Victoria	18,200	14,600	14,600	-20.2	65,300	66,300	69,000	5.6
All CMAs	18,000	15,100	14,600	-18.9	68,800	71,400	75,000	9.0
Non-CMAs	13,000	9,100	9,200	-29.5	63,100	62,500	65,000	3.1
All Canada	16,200	12,800	12,000	-25.7	66,600	68,100	72,000	8.0

a: Population aged 15+ only. Full-year full-time workers worked 49 or more weeks at mostly full-time hours. Earnings include wages, salaries, and self-employment earnings. Earnings are converted from nominal to real 2000 dollars using the Consumer Price Index (CPI). CMA-specific CPIs are used when these are available, and provincial CPIs are used otherwise.

Source: Census of Canada, 1981, 1991, 2001.

Table 4.4: Earnings change by percentile, men and women, full-year full-time workers[a]

	Women				Men				Both			
	1980	1990	2000	Percent change 1980 to 2000	1980	1990	2000	Percent change 1980 to 2000	1980	1990	2000	Percent change 1980 to 2000
CMA												
10th percentile	15,100	12,900	13,000	-14.2	21,800	18,200	16,000	-26.7	18,000	15,100	14,600	-18.9
25th percentile	21,600	21,800	22,000	1.8	32,400	30,200	28,000	-13.7	26,400	25,400	25,000	-5.1
Median	28,100	30,300	32,000	13.8	44,100	43,200	42,000	-4.7	38,000	37,000	38,000	0.0
75th percentile	37,200	41,300	45,200	21.7	58,400	60,100	60,000	2.8	51,900	52,100	55,000	6.0
90th percentile	48,400	54,300	61,800	27.8	77,200	79,400	85,400	10.7	68,800	71,400	75,000	9.0
Non-CMA												
10th percentile	10,100	7,200	7,600	-24.4	15,200	11,500	10,200	-32.5	13,000	9,100	9,200	-29.5
25th percentile	17,300	15,200	16,100	-7.0	26,500	24,300	24,000	-9.3	22,400	19,700	20,000	-10.7
Median	25,000	24,500	26,600	6.1	39,000	37,700	37,800	-2.9	34,700	32,700	32,000	-7.7
75th percentile	34,100	36,200	39,000	14.5	52,600	53,200	54,000	2.6	47,900	48,000	49,000	2.3
90th percentile	45,500	48,700	52,300	15.0	67,100	68,700	71,800	6.9	63,100	62,500	65,000	3.1

a: Population aged 15+ only. Full-year full-time workers worked 49 or more weeks at mostly full-time hours. Earnings include wages, salaries, and self-employment earnings. Earnings are converted from nominal to real 2000 dollars using the Consumer Price Index (CPI). CMA-specific CPIs are used when these are available, and provincial CPIs are used otherwise.

Source: Census of Canada, 1981, 1991, 2001.

Table 4.5: Earnings for selected age groups, full-year full-time workers, 1980, 1990, 2000[a]

	Age 25-34				Age 45-54			
	1980	1990	2000	Percent change 1980 to 2000	1980	1990	2000	Percent change 1980 to 2000
St.John's	34,300	31,600	30,000	-12.5	36,900	38,900	39,000	5.6
Halifax	33,700	32,800	30,500	-9.4	38,500	42,300	40,200	4.5
Saint John	35,500	31,400	30,000	-15.5	37,400	42,100	40,000	7.1
Chicoutimi–Jonquière	40,100	33,800	31,000	-22.7	44,700	44,700	48,000	7.4
Québec	37,800	31,700	30,000	-20.6	42,800	41,800	40,000	-6.6
Sherbrooke	33,700	30,200	29,100	-13.6	37,200	36,500	34,500	-7.4
Trois-Rivières	36,400	31,400	29,000	-20.4	40,000	39,900	40,000	0.0
Montréal	36,800	32,900	32,000	-12.9	39,400	38,800	39,900	1.5
Ottawa–Hull	39,600	37,400	38,000	-3.9	46,200	49,600	50,000	8.3
Kingston	36,500	33,800	33,000	-9.6	42,100	43,300	43,000	2.3
Oshawa	42,100	39,800	38,000	-9.6	46,500	48,300	50,000	7.6
Toronto	38,200	36,500	37,000	-3.2	42,200	42,100	43,000	1.9
Hamilton	40,500	36,200	36,000	-11.1	44,300	43,500	46,000	3.9
St. Catharines–Niagara	39,800	33,800	32,000	-19.7	44,300	42,300	41,000	-7.5
Kitchener	36,000	35,000	36,000	0.0	39,800	39,300	41,100	3.2
London	36,600	34,000	34,000	-7.1	41,200	41,400	42,500	3.0
Windsor	41,200	36,200	40,000	-2.9	45,400	45,900	50,000	10.2
Sudbury	42,100	36,200	32,000	-23.9	44,900	50,800	46,400	3.4
Thunder Bay	41,600	37,000	34,000	-18.2	45,200	45,600	45,000	-0.4
Winnipeg	36,000	32,800	30,000	-16.6	39,200	40,300	39,000	-0.6
Regina	39,200	35,100	31,500	-19.6	41,400	41,400	42,700	3.2
Saskatoon	38,200	33,200	30,000	-21.5	42,400	41,100	40,000	-5.8
Calgary	42,800	38,200	36,000	-15.9	47,600	44,500	45,000	-5.5
Edmonton	40,700	35,400	34,000	-16.4	46,300	42,900	42,600	-8.0
Abbotsford	41,400	36,800	32,100	-22.4	42,400	43,300	42,000	-0.8
Vancouver	40,800	36,700	36,000	-11.7	45,700	44,400	44,000	-3.7
Victoria	38,100	32,100	33,000	-13.4	42,400	42,700	42,200	-0.3
All CMAs	38,500	35,900	35,000	-9.2	42,700	42,400	42,000	-1.6
Non-CMAs	36,800	31,600	30,000	-18.5	36,800	36,500	37,100	0.8
All Canada	38,000	34,500	33,500	-12.0	42,400	40,500	40,000	-1.4

a: Full-year full-time workers worked 49 or more weeks at mostly full-time hours. Earnings include wages, salaries, and self-employment earnings. Earnings are converted from nominal to real 2000 dollars using the Consumer Price Index (CPI). CMA-specific CPIs are used when these are available, and provincial CPIs are used otherwise.
Source: Census of Canada, 1981, 1991, 2001.

Table 4.6: Earnings for men and women age 25-34, full-year full-time workers, 1980, 1990, 2000[a]

	Men				Women			
	1980	1990	2000	Percent change 1980 to 2000	1980	1990	2000	Percent change 1980 to 2000
St.John's	38,900	36,400	30,500	-21.6	27,000	27,900	28,000	3.7
Halifax	37,900	37,500	35,000	-7.6	26,400	27,200	28,000	6.0
Saint John	40,400	36,200	32,600	-19.4	25,300	25,300	26,300	4.1
Chicoutimi–Jonquière	42,900	39,900	35,000	-18.4	30,700	24,200	23,300	-24.0
Québec	41,400	36,500	33,000	-20.3	32,100	28,000	27,000	-15.9
Sherbrooke	36,800	33,300	31,900	-13.2	28,000	25,400	25,000	-10.7
Trois-Rivières	40,700	37,500	32,000	-21.4	27,000	24,300	25,000	-7.5
Montréal	41,100	36,300	35,000	-14.8	30,300	29,100	30,000	-0.9
Ottawa–Hull	44,000	41,000	40,000	-9.0	33,000	34,700	35,000	6.2
Kingston	40,700	37,400	36,000	-11.6	27,400	29,000	30,000	9.3
Oshawa	46,500	45,900	40,000	-13.9	30,000	32,600	33,300	10.7
Toronto	44,500	41,300	40,000	-10.0	31,500	33,700	34,500	9.5
Hamilton	44,700	42,300	40,000	-10.6	29,200	31,400	31,000	6.3
St. Catharines–Niagara	43,800	39,200	35,000	-20.1	26,600	26,600	27,100	2.2
Kitchener	40,900	38,900	40,000	-2.3	26,600	28,000	30,000	13.0
London	41,000	38,600	38,000	-7.2	29,200	29,100	30,000	2.9
Windsor	44,700	41,000	45,000	0.7	31,000	27,800	30,000	-3.2
Sudbury	44,300	41,000	36,000	-18.8	30,300	30,200	29,100	-3.9
Thunder Bay	45,200	41,000	38,000	-15.9	29,900	29,600	30,000	0.4
Winnipeg	40,100	36,700	32,000	-20.2	28,300	28,600	26,000	-8.2
Regina	44,500	38,400	34,300	-23.0	31,700	30,100	29,000	-8.5
Saskatoon	42,400	37,000	33,400	-21.4	29,700	27,600	27,000	-9.3
Calgary	48,800	42,000	40,000	-18.1	32,500	32,800	32,000	-1.4
Edmonton	46,600	39,300	38,000	-18.5	31,800	29,500	29,000	-8.8
Abbotsford	44,500	40,500	35,000	-21.3	30,500	28,200	28,600	-6.3
Vancouver	45,000	39,700	39,000	-13.4	32,200	31,100	33,000	2.6
Victoria	42,400	36,600	35,000	-17.4	31,000	29,100	31,000	0.0
All CMAs	43,200	39,100	38,000	-12.0	30,900	30,700	31,000	0.4
Non-CMAs	40,700	36,500	35,000	-14.1	27,300	25,000	25,000	-8.4
All Canada	42,400	38,200	36,600	-13.8	30,000	29,500	30,000	0.1

a: Population aged 25–34 only. Full-year full-time workers worked 49 or more weeks at mostly full-time hours. Earnings include wages, salaries, and self-employment earnings. Earnings are converted from nominal to real 2000 dollars using the Consumer Price Index (CPI). CMA-specific CPIs are used when these are available, and provincial CPIs are used otherwise.

Source: Census of Canada, 1981, 1991, 2001.

Table 4.7: Earnings by educational attainment, full-year full-time workers, 1980, 1990, 2000[a]

	High school or less				University or more				University or more/ high school or less			
	1980	1990	2000	Percent change 1980 to 2000	1980	1990	2000	Percent change 1980 to 2000	1980	1990	2000	2000 minus 1980
St.John's	28,100	27,900	26,000	-7.4	51,800	51,900	49,000	-5.5	1.84	1.86	1.88	0.04
Halifax	29,500	29,900	28,600	-3.0	48,400	49,500	48,000	-0.8	1.64	1.66	1.68	0.04
Saint John	30,100	29,100	27,000	-10.4	45,900	48,500	48,000	4.5	1.52	1.67	1.78	0.25
Chicoutimi- Jonquière	35,900	34,500	32,800	-8.7	57,900	54,400	51,000	-11.9	1.61	1.58	1.55	-0.06
Québec	31,000	30,400	29,100	-6.2	59,900	54,800	52,000	-13.2	1.93	1.80	1.79	-0.15
Sherbrooke	28,300	27,300	26,400	-6.8	57,900	50,800	49,000	-15.3	2.05	1.86	1.86	-0.19
Trois-Rivières	30,000	28,600	27,700	-7.6	57,900	51,200	50,000	-13.6	1.93	1.79	1.81	-0.12
Montréal	31,000	30,300	28,200	-9.3	56,500	50,900	50,000	-11.5	1.82	1.68	1.77	-0.05
Ottawa- Hull	33,000	34,700	32,000	-2.9	62,400	61,000	60,000	-3.9	1.89	1.76	1.88	-0.02
Kingston	33,200	31,400	31,000	-6.6	54,900	53,100	55,000	0.2	1.65	1.69	1.77	0.12
Oshawa	38,700	37,700	38,800	0.2	55,800	58,700	58,000	4.0	1.44	1.56	1.49	0.05
Toronto	33,700	33,700	32,000	-5.2	56,200	54,100	53,000	-5.8	1.67	1.61	1.66	-0.01
Hamilton	37,600	34,800	35,000	-7.0	56,300	54,300	55,000	-2.3	1.50	1.56	1.57	0.07
St. Catharines- Niagara	37,600	33,800	32,000	-14.9	57,700	56,000	50,000	-13.4	1.53	1.66	1.56	0.03
Kitchener	31,600	31,400	33,000	4.3	54,700	54,300	53,000	-3.0	1.73	1.73	1.61	-0.12
London	33,200	31,400	32,000	-3.6	53,400	51,900	52,000	-2.7	1.61	1.65	1.63	0.02
Windsor	36,900	36,200	37,000	0.3	56,800	54,300	55,000	-3.2	1.54	1.50	1.49	-0.05
Sudbury	41,200	38,600	34,000	-17.4	55,300	59,200	55,000	-0.6	1.34	1.53	1.62	0.28
Thunder Bay	38,700	36,000	35,600	-8.1	53,800	56,700	50,300	-6.4	1.39	1.58	1.41	0.02
Winnipeg	30,900	30,300	28,000	-9.5	52,300	50,700	48,000	-8.2	1.69	1.67	1.71	0.02
Regina	33,000	31,400	29,600	-10.5	56,700	54,300	52,000	-8.3	1.72	1.73	1.76	0.04
Saskatoon	33,100	29,900	28,400	-14.1	53,500	50,000	48,000	-10.2	1.62	1.67	1.69	0.07
Calgary	34,600	31,800	30,000	-13.4	58,400	59,400	56,000	-4.2	1.69	1.87	1.87	0.18
Edmonton	33,900	30,700	30,000	-11.5	54,100	53,300	50,900	-5.8	1.60	1.74	1.70	0.10
Abbotsford	38,100	34,500	32,000	-16.1	52,000	50,300	50,000	-3.8	1.36	1.46	1.56	0.20
Vancouver	36,500	33,300	32,000	-12.2	53,600	51,700	50,000	-6.8	1.47	1.55	1.56	0.09
Victoria	34,000	30,500	33,000	-3.1	52,900	52,700	51,000	-3.7	1.56	1.73	1.55	-0.01
All CMAs	33,000	31,800	30,000	-9.0	56,200	54,100	52,000	-7.5	1.70	1.70	1.73	0.03
Non-CMAs	30,400	28,500	28,000	-8.0	52,800	51,700	50,000	-5.3	1.74	1.81	1.79	0.05
All Canada	32,400	30,400	30,000	-7.4	54,900	53,400	51,000	-7.2	1.69	1.76	1.70	0.01

a. Population aged 15+ only. Full-year full-time workers worked 49 or more weeks at mostly full-time hours. Earnings include wages, salaries, and self-employment earnings. Earnings are converted from nominal to real 2000 dollars using the Consumer Price Index (CPI). CMA-specific CPIs are used when these are available, and provincial CPIs are used otherwise.

Source: Census of Canada, 1981, 1991, 2001.

Part 2

Business activity in CMAs

Chapter 5

Industrial structure

The fact that the growth of services employment has outstripped goods employment is well known. This chapter documents changes in the industrial structure at the CMA level. The purpose is to show which CMAs are more and less services-oriented, where the big changes are, and whether the changes have led to more or less industrial diversity.[18]

5.1 CMAs are more services-oriented than non-CMAs but have varying levels of services orientation

Services sector employment is more important in CMAs than non-CMAs (Table 5.1). In 2003, services employment comprised 78.1% of employment in CMAs, compared to 67.7% in non-CMAs. Hence, goods-producing industries employed a much larger fraction of workers in non-CMAs (32.3%, compared to 21.9% in CMAs).

However, such numbers mask substantial differences among CMAs in the distribution of employment across goods and services industries. In Windsor, Kitchener, and Abbotsford, for instance, the fraction of the workforce employed in goods-producing industries was even larger than in non-CMAs. Of note, smaller Quebec CMAs and CMAs located in southern Ontario all had larger-than-average shares of workers employed in goods-producing industries.

The six most services-oriented CMAs of the country contained capital cities: St. John's, Halifax, Québec, Ottawa–Hull, Regina, and Victoria. In these CMAs, services industries employed at least 85% of the workforce. Large public sectors in these CMAs would account for this high level of services orientation.

5.2 Almost all CMAs became more services-oriented over the 1990s

CMAs and non-CMAs were already highly services-oriented before the recession of 1990 to 1993; however, services orientation increased during the recession years. In 1987 services employment comprised 74.5% of employment in CMAs compared to 62.1% in non-CMAs (Figure 5.1). By 1993 services employment comprised 78.2% of employment in CMAs and 66.1% of employment in non-CMAs regions.

This shift towards more services orientation appears to have been the result of greater loss of employment in goods industries during the recession (Figure 5.2). During the recession years, employment growth in services could be described as a "slow down," showing growth near 0% between 1992 and 1993, and no

18. There are two ways one can look at industrial structure. The first is to examine the industrial composition of jobs located in the CMA. The second is to examine the people who live in the CMA and find what industry they worked in. These two will not give the same result because some people do not work in the same CMA in which they live. Results from the 2001 Census indicate that CMAs typically employ about 3% more workers than actually live there. However, in some CMAs, and in particular, Oshawa, Hamilton, and Abbotsford, significant fractions of the populations work outside of the CMA, probably in the nearby CMAs of Toronto and Vancouver. Nevertheless, the residents' industry of employment can be interpreted as a good approximation of the industrial structure of the CMA. Hence, this chapter examines the industrial structure of CMAs by examining the industries that residents are employed in. A separate report in this series on *Trends and Conditions in Canadian CMAs* will examine the question of where people work in more detail.

years of decline. At the same time, employment losses in goods industries were substantial, with employment dropping more than 15% in CMAs and about 8% in non-CMAs between 1989 and 1993. Employment in goods did not fully recover to pre-recession levels until 2000 in either CMA or non-CMAs. As can be seen from Figure 5.2, both goods and services employment grew faster in CMAs than non-CMAs, so both faster growth rates in goods and services, and a favourable orientation towards more services in CMAs would have helped to boost CMA employment growth rates relative to that of the non-CMA sector.[19]

Services employment grew faster than goods employment in all but four CMAs (Table 5.2). The relative growth in services employment was highest in Hamilton, Oshawa, St. Catharines–Niagara, and Kitchener. In each of these CMAs the share of employment in the services sector grew by more than 8 percentage points. These CMAs are also ones that had relatively low concentrations of services production at the beginning of the period.[20]

From 1989 to 2003, the goods-producing sector grew most strongly in three western CMAs: Calgary (up 47.2%), Edmonton (up 43.8%), and Abbotsford (up 53.1%). In Calgary and Abbotsford, both the goods and the services sectors grew by similar proportions. In Edmonton the goods sector grew significantly faster than the services sector. Employment in goods grew more than 10% in Québec (+17.7%), Sherbrooke (+27.1%), Ottawa–Hull (+20.1%) and Windsor (+13.8%). In other CMAs employment in the goods sectors stagnated or declined. Employment in the goods sector declined most in Saint John (-26.2%), Sudbury (-20.0%), Hamilton (-17.6%), Regina (-16.6%), Chicoutimi–Jonquière (-15.4%) and Montréal (-10.6%).

Over the same period, the services sector grew strongly in virtually all CMAs. It grew more than 40% in 3 CMAs, between 20% and 40% in 14 CMAs, and more than 10% in all but 1 of the rest.[21]

5.3 Industrial composition differed across CMAs

In order to examine differences in the industrial structure of CMAs, it is useful to decompose employment shares in goods and services across 2-digit NAICS industries (Table 5.3).

In most CMAs, goods-producing workers were mostly employed in manufacturing industries. However, manufacturing was mostly concentrated in Ontario and Quebec CMAs. Manufacturing industries employed more than 25% of the workforce in Windsor and Kitchener, and the proportion of the workforce employed in manufacturing industries surpassed 15% in all other southern Ontario CMAs. Other CMAs with relatively large manufacturing sectors included Sherbrooke (22.4%), Trois-Rivières (16.8%), and Montréal (16.5%).

Fewer CMAs had significant employment shares in primary goods industries (corresponding to the first two categories of Table 5.4). Only two smaller CMAs had a significant share of the workforce employed in such industries in 2003 (Table 5.3): Sudbury (9.2% of workers in mining and oil and gas extraction industries) and Abbotsford (with almost 10% of workers in agriculture, forestry, and fishing industries).

19. Employment growth from 1989 to 2003 was 23.3% in CMAs compared to 17.7% in non-CMAs.
20. As noted above, these figures refer to the industry of employment of the CMA population, so it might also be that more workers in services industries in Toronto are commuting from residences in nearby CMAs.
21. Employment in goods and services industries in 1986 and 2001 was also calculated using census data and the SIC-E 1980 industrial classification. At this level of detail the census and LFS results were highly correlated. As with the LFS, Oshawa, Hamilton, and St. Catharines–Niagara experienced the largest shifts in employment from goods to services production over the period. Using the LFS data, Kingston showed a relatively small growth in goods employment and little change in services. However, results from the census suggest that services employment may have been stronger in Kingston than LFS estimates suggest.

Professional, scientific, and technical services (which comprises most business services) were clearly concentrated in the most populated CMAs. Three out of four workers employed in this category of services were located in the five most populous CMAs (Toronto, Montréal, Vancouver, Ottawa–Hull, and Calgary). Toronto also had more than its share of employees in financial, insurance, and real estate industries (FIRE industries).

Not surprisingly, Ottawa–Hull had the largest body of public administration employees (126,100). In 2003 public administration employees represent as much as 20.7% of the national capital workforce. Other cities with strong public administration sectors included some of the CMAs containing provincial capitals: St. John's (11.2%), Québec (12.7%), Regina (9.3%), and Victoria (9.6%).

5.4 The share of employment in manufacturing declined in the face of rising business services employment

Underlying the increase in the services orientation of employment in CMAs is a general decline in the relative importance of manufacturing and a rise in business services industries. Table 5.4 shows the change in employment between 1989 and 2003 across 20 industry groups, defined using NAICS classification and the LFS. Numbers denoted by the symbol "~" indicate industries where employment growth was weak, yielding a decline in that industry's share in the CMA by 2% or more. Numbers denoted by the symbol "*" indicate industries where employment growth was strong, yielding a rise in that industry's share in the CMA by 2% or more.

Manufacturing lost employment share in most CMAs between 1989 and 2003. In Montréal, manufacturing employment declined by an estimated 36,600 workers, which converts to a 5.1% decline in the share of manufacturing employment in that CMA. In Toronto, manufacturing employment rose by 49,600 workers, but this rise was slow relative to employment growth in that CMA overall. As a result, the share of Toronto's employment that was in manufacturing fell by 2.1%. The share of employment in manufacturing fell by more than 2% in 10 CMAs.

At the same time, the share of employment grew in business services industries in most CMAs. This was especially true in the professional, scientific, and technical services industry, where employment share grew by more than 2% in 11 CMAs, and in the administrative and support, waste management, and remediation services industries where employment share grew by more than 2% in 9 CMAs.[22]

5.5 The shift towards services: Profiles of Montréal, Toronto, and Vancouver

The three largest CMAs are examples of CMAs that gained employment in business services but did not do as well in manufacturing industries. Table 5.5 shows the detailed distribution of employment across the NAICS 3-digit industries accounting for at least 50% of all services-producing workers in 2003. It shows that the three largest CMAs made substantial gains in professional, scientific, and technical services and in administrative and support services over the 1990s. In 2003, these two industries comprised 14.2% of the services-producing workforce in Montréal, 19.0% in Toronto, and 15.8% in Vancouver. Of note, employment in health-related industries (social assistance and ambulatory health care services) also increased substantially over the 1990s in all three CMAs.

22. Results using census data between 1986 and 2001 and the SIC-E 1980 classification of industries were also computed. In this data, manufacturing lost more than 2% of its employment share in 16 CMAs. Employment growth was most concentrated in the business services industry, increasing employment shares by more than 2% in 23 CMAs. Substantial employment growth was also noted in the health and social services industry, and employment share declines of more than 2% were noted in the government services industry in 9 CMAs.

As noted earlier in this section, differences in job creation across the three largest CMAs were larger in the manufacturing sector. Manufacturing employment grew modestly in Toronto and Vancouver, but declined in Montréal (Table 5.6). Consequently, employment in goods-producing industries declined by 10.6% across the 1989 to 2003 period in Montréal, but grew by 8.9% and 20.1% in Toronto and Vancouver, respectively. What factors underlie the faster loss of manufacturing jobs in Montréal?

Differences in the composition of goods-producing employment is one factor that could lead to different employment outcomes. Table 5.6 shows the distribution of employment across the NAICS 3-digit industries accounting for at least 50% of all goods-producing workers in 2003. In Montréal, chemical and clothing manufacturing industries accounted for a large portion of the goods-producing workforce in 1989, but both sectors performed poorly across the 1990s. Employment in other goods-producing industries declined by 15.1%, and construction industries (trade and prime contracting) did not perform well, which could be associated partly with slower overall population growth. These declines were partly offset by gains in printing activities and in food manufacturing.

In Toronto, gains in transportation equipment industries (43.1%), as well as in plastics and rubber industries (57.2%), more than offset losses in smaller goods-producing industries. Construction industries and food manufacturing industries also posted strong gains over the 1990s.

In Vancouver, goods-producing industries grew by 20.1% as food manufacturing industries almost doubled in size (from 10,500 to 20,500 workers). Together with strong growth in fabricated metal product industries (+35.5%), these gains overshadowed the weak performance of wood product industries and the construction sector. Hence, it appears that employment growth was slower in Montréal, in part because Montréal was more concentrated in sectors that lost more workers over the 1990s, and in particular, clothing and chemicals.

5.6 Manufacturing became more concentrated in CMAs located near the Canada-U.S. border, while business services remained concentrated in Ottawa–Hull, Toronto, Calgary, and Vancouver

Another question of particular interest is whether particular industries became more concentrated over the last 15 years. This subsection looks at whether manufacturing or business services became more or less concentrated in particular CMAs using location quotients. The location quotient is an index that reveals the degree to which employment in a particular industry is concentrated in a CMA compared to the average for all CMAs. The CMA average is given an index of 1, and a value above 1 indicates that employment is concentrated to a more than average degree in that CMA.

Manufacturing has remained most concentrated in Central Canada CMAs (Figure 5.3). Chicoutimi–Jonquière, Sherbrooke, Trois-Rivières, Montréal, Oshawa, Toronto, Hamilton, St. Catharines–Niagara, Kitchener, London, and Windsor are all CMAs in which manufacturing was more concentrated than average. Sherbrooke and Windsor increased their concentration in manufacturing over the 1986 to 2001 period, perhaps reflecting their proximities to the major U.S. markets. In contrast, concentration fell in Oshawa, Hamilton, and St. Catharines–Niagara, reflecting declines in their manufacturing sectors, and their relatively fast growing services employment.

Business services also tended to be much less concentrated into relatively few CMAs compared to manufacturing (Figure 5.4). While location quotients for manufacturing were often above 1.5 and below 0.5, location quotients for business services were more clustered around the value of 1. Nevertheless, business services were more concentrated in Ottawa–Hull, Toronto, Calgary, and Vancouver—both in 1986 and in 2001. Montréal, despite being the second largest CMA, had only the fifth highest concentration of business services among CMAs.

5.7 Larger CMAs were more industrially diverse than smaller CMAs, but larger CMAs became less diverse over the period[23]

The shift from employment in manufacturing towards employment in business services industries has clearly changed the face of employment in Canadian CMAs. This raises the question of what impact this has had on the diversity of employment. Diversity is often seen as a positive aspect of urban economies. More diverse economies may be less affected by downturns in one key industry, are often thought to be more dynamic, and may be more attractive to prospective employers, contributing to the growth of the region.

Table 5.7 presents an index of industrial diversity in CMAs. The index is benchmarked to the level of diversity in Toronto in 1986. Hence, the diversity index of other CMAs and other years reflects differences in diversity from this reference point. The data are organized by CMA population since it has been shown in other work that city size is related to diversity. As this is data from the census, the diversity relates to the industrial diversity of workers who live in the CMA, rather than the industrial diversity of jobs located in the CMA. Beckstead and Brown (2003) present an examination of the latter factor.

CMAs vary substantially in their level of diversity. Ottawa–Hull, which had the least diversity among CMAs, had an index of 44.0 in 2001. This put Ottawa–Hull at nearly half the level of diversity of the most industrially diverse CMA, Montréal, whose index was 81.0 in 2001.

Larger CMAs tend to be more diverse than smaller. The 3 largest CMAs—Toronto, Montréal, and Vancouver—had an average diversity index of 80.0 in 2001 compared to an index of 65.6 in mid-sized CMAs, and 63.2 in smaller CMAs. There are some interesting exceptions to this pattern. Kitchener, with a diversity index of 78.4 in 2001, was nearly as diverse as Montréal and Toronto, and was more diverse than Vancouver. Ottawa–Hull, with a diversity index of 44.0, had the lowest diversity among CMAs, and a much lower level of diversity than much smaller CMAs. This probably reflects the concentration of employment in the public sector and high tech industries in that CMA.

Larger CMAs also became less diverse over the period, while diversity remained steady in most mid-size and smaller CMAs. Between 1986 and 2001 diversity fell by 15.9% across the three largest CMAs. The largest drop was noted in Toronto, where diversity fell by 19.1%. These changes were gradual across the period, with diversity falling steadily in each inter-censal period.

In contrast, diversity in mid-sized and smaller CMAs tended not to change as much. Diversity fell by just 1.3% in mid-sized CMAs and by 2.9% in smaller CMAs between 1986 and 2001. Again there were some exceptions, as diversity changed more in some smaller CMAs.

These changes in diversity are consistent with those seen in other studies. It may be that the increasing importance of international trade has led Canada's largest metropolitan areas to increasingly specialize. With increased international trade, urban regions can be expected to increasingly specialize in industries where they hold a comparative advantage.

23. This subsection draws from Beckstead and Brown (2003). Beckstead and Brown examine specialization using data from the Business Register for the period 1992 to 2002. Their results are qualitatively similar to those shown here, despite a number of important differences in the data and approach.

Table 5.1: Share of employment in goods and services, all CMAs, 2003

	Goods	Services
St. John's	12.0	88.0
Halifax	12.9	87.1
Saint John	18.3	81.7
Chicoutimi–Jonquière	23.2	76.8
Québec	14.6	85.4
Sherbrooke	28.3	71.7
Trois-Rivières	25.8	74.2
Montréal	21.8	78.2
Ottawa–Hull	12.2	87.8
Kingston	15.4	84.6
Oshawa	28.7	71.3
Toronto	24.5	75.5
Hamilton	28.7	71.3
St. Catharines–Niagara	25.4	74.6
Kitchener	35.2	64.8
London	24.9	75.1
Windsor	35.4	64.6
Sudbury	21.9	78.1
Thunder Bay	20.4	79.6
Winnipeg	19.4	80.6
Regina	13.8	86.2
Saskatoon	16.5	83.5
Calgary	23.9	76.1
Edmonton	22.5	77.5
Abbotsford	33.0	67.0
Vancouver	17.6	82.4
Victoria	13.6	86.4
All CMAs	21.9	78.1
Non-CMAs	32.3	67.7
All Canada	25.3	74.7

Source: Labour Force Survey, 2003.

Table 5.2: Employment in goods and services industries, 1989–2003

	1989		2003		Percent change 1989 to 2003			Percent of employment in services		
	Goods	Services	Goods	Services	Goods	Services	Both	1989	2003	2003 minus 1989
St. John's	10,100	64,300	10,700	78,200	6.0	21.6	19.5	86.4	88.0	1.5
Halifax	24,200	134,900	24,200	163,800	0.2	21.4	18.2	84.8	87.1	2.3
Saint John	14,600	41,600	10,800	48,300	-26.2	16.3	5.2	73.9	81.7	7.8
Chicoutimi–Jonquière	19,400	44,500	16,400	54,500	-15.4	22.4	10.9	69.6	76.8	7.2
Québec	44,500	253,600	52,400	306,200	17.7	20.8	20.3	85.1	85.4	0.3
Sherbrooke	17,600	49,400	22,400	56,700	27.1	14.8	18.0	73.7	71.7	-2.0
Trois-Rivières	18,500	43,000	17,000	48,900	-8.1	13.6	7.1	70.0	74.2	4.3
Montréal	438,600	1,104,900	392,300	1,403,600	-10.6	27.0	16.4	71.6	78.2	6.6
Ottawa–Hull	62,000	426,100	74,500	534,100	20.1	25.3	24.7	87.3	87.8	0.5
Kingston	8,400	46,700	8,500	46,900	0.7	0.4	0.4	84.7	84.6	0.0
Oshawa	47,000	79,400	49,300	122,500	4.9	54.3	35.9	62.8	71.3	8.5
Toronto	601,200	1,543,700	655,000	2,021,900	8.9	31.0	24.8	72.0	75.5	3.6
Hamilton	126,600	195,000	104,400	259,500	-17.6	33.1	13.1	60.6	71.3	10.7
St. Catharines–Niagara	54,300	106,000	49,700	146,100	-8.4	37.9	22.2	66.1	74.6	8.5
Kitchener	85,300	111,000	83,000	152,900	-2.8	37.7	20.1	56.5	64.8	8.3
London	51,600	144,600	54,800	165,300	6.2	14.3	12.2	73.7	75.1	1.4
Windsor	50,300	81,800	57,200	104,200	13.8	27.4	22.2	61.9	64.6	2.6
Sudbury	19,800	50,400	15,900	56,600	-20.0	12.3	3.2	71.8	78.1	6.3
Thunder Bay	14,200	47,500	13,100	51,100	-8.0	7.6	4.0	76.9	79.6	2.7
Winnipeg	71,500	260,000	70,100	291,600	-1.9	12.1	9.1	78.4	80.6	2.2
Regina	17,600	78,900	14,700	91,900	-16.6	16.5	10.5	81.7	86.2	4.5
Saskatoon	21,500	80,600	20,000	101,100	-6.7	25.6	18.8	78.9	83.5	4.5
Calgary	96,600	293,200	142,300	452,600	47.2	54.3	52.6	75.2	76.1	0.9
Edmonton	84,100	331,500	120,900	415,800	43.8	25.4	29.1	79.8	77.5	-2.3
Abbotsford	16,000	33,800	24,500	49,600	53.1	47.0	49.0	67.9	67.0	-0.9
Vancouver	162,800	636,400	195,400	915,400	20.1	43.8	39.0	79.6	82.4	2.8
Victoria	21,400	108,300	21,200	134,000	-1.2	23.8	19.7	83.5	86.4	2.9
All CMAs	2,199,800	6,390,800	2,320,700	8,273,200	5.5	29.5	23.3	74.4	78.1	3.7
Non-CMAs	1,638,700	2,757,100	1,665,400	3,486,700	1.6	26.4	17.2	62.7	67.7	5.0
All Canada	3,838,500	9,147,900	3,986,100	11,759,900	3.8	28.6	21.2	70.4	74.7	4.3

Note: Numbers are rounded to the nearest 100.
Source: Labour Force Survey, 1989, 2003.

Table 5.3: Employment share by industry, goods (%), 2003

	Agriculture, forestry, fishing and hunting	Mining and oil and gas extraction	Utilities	Construction	Manufacturing	All goods
St. John's	1.2	2.2	1.2	3.5	3.9	12.0
Halifax	0.5	0.7	0.6	5.3	5.8	12.9
Saint John	1.3	0.6	1.7	5.8	8.9	18.3
Chicoutimi–Jonquière	1.8	0.6	1.4	4.8	14.5	23.2
Québec	0.7	0.2	0.6	4.5	8.7	14.6
Sherbrooke	0.8	0.2	0.4	4.5	22.4	28.3
Trois-Rivières	1.1	0.1	2.0	5.8	16.8	25.8
Montréal	0.4	0.1	0.8	4.1	16.5	21.8
Ottawa–Hull	0.4	–	0.4	5.6	5.9	12.2
Kingston	0.6	0.1	0.8	6.0	8.0	15.4
Oshawa	0.9	0.1	3.2	5.6	19.0	28.7
Toronto	0.3	0.1	0.6	5.8	17.7	24.5
Hamilton	0.9	0.1	0.9	5.8	21.1	28.7
St. Catharines–Niagara	2.1	0.2	0.4	7.1	15.6	25.4
Kitchener	1.2	–	0.7	6.9	26.4	35.2
London	1.6	–	0.4	6.0	16.8	24.9
Windsor	0.5	0.1	0.4	5.0	29.4	35.4
Sudbury	0.6	9.2	0.5	5.9	5.6	21.9
Thunder Bay	2.0	0.9	0.9	6.5	10.1	20.4
Winnipeg	0.9	–	1.3	4.4	12.8	19.4
Regina	0.7	0.7	1.2	5.9	5.3	13.8
Saskatoon	1.4	1.7	0.4	5.2	7.8	16.5
Calgary	0.6	5.1	0.9	8.2	9.2	23.9
Edmonton	1.0	2.5	0.9	8.8	9.4	22.5
Abbotsford	9.9	0.3	0.5	9.2	13.0	33.0
Vancouver	1.2	0.2	0.7	5.2	10.2	17.6
Victoria	1.6	0.1	0.3	6.4	5.2	13.6
All CMAs	0.8	0.6	0.8	5.7	14.1	21.9
Non-CMAs	7.1	2.2	1.0	6.4	15.5	32.3
All Canada	2.8	1.2	0.8	5.9	14.6	25.3

Source: Labour Force Survey, 2003.

Table 5.3: Employment share by industry, services (%), 2003 – *(concluded)*

	Wholesale trade	Retail trade	Transportation and warehousing	Information and cultural industries	Finance and insurance	Real estate and rental and leasing	Professional, scientific and technical services	Administrative and support, waste management and remediation services[1]	Educational services	Health care and social assistance	Arts, entertainment and recreation	Accommodation and food services	Other services (except public administration)	Public administration	All services
St. John's	2.6	14.1	5.3	2.9	2.3	2.3	6.2	4.9	8.0	13.8	1.4	6.8	6.1	11.2	88.0
Halifax	4.5	12.7	5.2	3.0	4.1	2.5	6.2	5.8	8.2	12.7	2.3	6.3	5.0	8.8	87.1
Saint John	3.7	11.9	3.9	3.3	3.0	1.8	5.5	11.9	5.5	14.0	1.6	6.2	5.1	4.4	81.7
Chicoutimi–Jonquière	2.5	14.7	4.1	1.9	2.5	1.3	5.8	2.6	8.6	12.8	1.2	6.6	5.9	6.4	76.8
Québec	3.0	13.1	3.6	2.7	4.2	1.8	6.4	3.4	8.2	14.0	1.6	7.3	3.5	12.7	85.4
Sherbrooke	1.5	12.1	4.2	1.1	3.4	0.9	4.5	3.7	10.1	14.9	1.3	5.4	4.6	4.0	71.7
Trois-Rivières	3.5	13.9	3.3	2.1	3.0	1.2	4.2	2.9	8.5	14.7	1.6	6.5	5.6	3.3	74.2
Montréal	4.7	13.2	4.9	3.0	4.7	1.8	7.7	3.5	7.0	11.3	2.2	5.6	4.2	4.4	78.2
Ottawa–Hull	2.4	10.5	3.5	2.7	3.0	1.7	10.1	4.7	6.4	9.8	2.4	5.3	4.4	20.7	87.8
Kingston	2.1	11.7	2.9	2.4	2.6	2.5	3.3	5.1	12.4	15.4	1.8	9.0	3.8	9.7	84.6
Oshawa	4.0	12.1	3.9	2.5	5.3	1.5	4.9	3.9	7.2	9.5	1.8	6.1	3.0	5.4	71.3
Toronto	4.3	10.6	5.1	3.2	7.1	2.2	9.7	4.7	5.6	7.9	1.9	5.5	4.4	3.3	75.5
Hamilton	4.0	11.6	3.5	2.1	5.2	1.6	5.8	3.6	6.6	10.5	2.4	6.7	4.0	3.8	71.3
St. Catharines–Niagara	2.4	13.0	4.7	2.1	3.2	1.7	3.6	5.2	6.2	10.6	5.1	10.1	3.4	3.4	74.6
Kitchener	3.3	11.0	3.9	2.1	6.3	1.5	4.8	3.7	7.3	7.3	1.9	4.7	4.3	2.7	64.8
London	3.2	11.3	3.6	1.7	5.4	2.5	4.2	4.9	8.4	14.1	2.1	6.5	3.6	3.6	75.1
Windsor	2.7	12.4	3.4	1.0	2.5	1.4	4.1	2.7	7.4	9.8	4.3	6.5	4.1	2.3	64.6
Sudbury	3.2	12.7	5.0	2.2	2.5	1.5	3.7	4.8	8.7	14.1	2.2	6.5	3.9	6.8	78.1
Thunder Bay	2.8	12.9	5.5	1.8	2.5	1.9	4.0	3.8	8.3	14.9	3.2	7.2	4.1	6.7	79.6
Winnipeg	3.9	11.3	6.1	2.2	4.4	1.6	5.3	4.2	7.5	12.8	2.6	7.4	5.3	6.1	80.6
Regina	3.6	12.5	3.7	5.1	7.2	2.0	5.8	3.7	7.2	11.8	2.3	8.3	3.7	9.3	86.2
Saskatoon	4.3	12.1	5.1	2.5	3.7	1.9	4.9	3.2	11.1	13.3	1.8	9.1	5.0	5.3	83.5
Calgary	4.5	11.1	6.0	3.5	4.2	2.0	10.0	4.0	5.5	8.9	2.0	6.8	4.5	3.0	76.1
Edmonton	4.5	11.8	5.4	2.0	3.2	1.8	6.6	4.5	7.2	10.1	1.9	6.9	5.1	6.3	77.5
Abbotsford	3.2	11.9	6.0	1.5	2.6	1.4	4.7	3.4	6.1	9.6	1.8	5.6	3.3	4.1	67.0
Vancouver	4.7	11.6	5.9	3.2	5.1	2.6	9.0	4.3	7.2	9.5	2.8	7.6	4.5	4.4	82.4
Victoria	2.8	12.2	4.1	1.9	2.9	1.9	6.7	5.0	7.9	13.3	3.0	10.0	5.1	9.6	86.4
All CMAs	4.0	11.7	4.9	2.8	5.0	2.0	7.8	4.2	6.8	10.2	2.2	6.4	4.4	5.6	78.1
Non-CMAs	2.8	12.6	4.8	1.4	2.7	1.2	3.4	3.1	6.4	11.7	1.9	6.8	5.7	4.2	67.7
All Canada	3.6	12.0	4.9	2.3	4.2	1.7	6.3	3.9	6.7	10.7	2.1	6.5	4.5	5.2	74.6

1. Includes management of companies and enterprises.
Source: Labour Force Survey, 2003.

Table 5.4: Employment change by industry, goods, 1989–2003

	Agriculture, forestry, fishing and hunting	Mining and oil and gas extraction	Utilities	Construction	Manufacturing	All goods
St. John's	200	1,500	100	-700	-500	600
Halifax	-200	700	-500	1,500	-1,400–	0 –
Saint John	100	-200	100	500	-4,300–	-3,800 –
Chicoutimi–Jonquière	-200	0	800	-500	-3,100–	-3,000 –
Québec	500	200	-700	-500	8,400	7,900
Sherbrooke	-500	100	-700	0	5,800*	4,800 *
Trois-Rivières	-300	0	-400	-400	-400	-1,500 –
Montréal	-2,700	-1,100	1,400	-7,300	-36,600–	-46,300 –
Ottawa–Hull	-300	-700	-300	9,100	4,600	12,500
Kingston	300	-200	-100	100	-100	100
Oshawa	-200	0	1,900	1,900	-1,200–	2,300 –
Toronto	-7,700	-2,500	-11,700	26,100	49,600–	53,800 –
Hamilton	-2,100	-700	500	500	-20,500–	-22,200 –
St. Catharines–Ntagara	1,700	-300	-200	4,300	-9,900–	-4,500 –
Kitchener	100	-200	700	3,300	-6,200–	-2,400 –
London	-600	-600	-300	2,800	1,900	3,200
Windsor	-2,000	-200	-400	2,900	6,600	6,900 –
Sudbury	0	-4,700 –	200	-400	900	-4,000 –
Thunder Bay	200	100	-300	100	-1,200–	-1,100 –
Winnipeg	-600	-700	300	800	-1,200	-1,300 –
Regina	-2,600 –	0	-500	800	-600	-2,900 –
Saskatoon	-3,600 –	-200	0	300	2,100	-1,400 –
Calgary	-900	0 –	2,200	22,600	21,700	45,600
Edmonton	1,400	4,300	-800	18,800*	13,000	36,800*
Abbotsford	4,400 *	0	200	1,300	2,600	8,500
Vancouver	2,300	-2,000	3,000	900	28,400	32,700 –
Victoria	500	-600	-600	-800	1,300	-300 –
All CMAs	-12,900	-7,700	-6,100	87,900	59,600–	120,800 –
Non-CMAs	-103,900 –	6,700	800	31,700	104,700	26,600 –
All Canada	-116,700	14,500	5,300	119,600	164,400	147,500 –

Note: Numbers are rounded to the nearest 100.
Numbers denoted by the symbol "–" indicate industries where employment growth was weak, yielding a decline in that industry's share in the CMA by 2% or more. Numbers denoted by the symbol "*" indicate industries where employment growth was strong, yielding a rise in that industry's share in the CMA by 2% or more.
Source: LFS, 1989, 2003.

Table 5.4: Employment change by industry, services – *(concluded)*

	Wholesale trade	Retail trade	Transportation and warehousing	Information and cultural industries	Finance and insurance	Real estate and rental and leasing	Professional, scientific and technical services	Administrative and support, waste management and remediation services[1]	Educational services	Health care and social assistance	Arts, entertainment and recreation	Accommodation and food services	Other services (except public administration)	Public administration	All services
St. John's	-400	1,100	200	300	-1,400–	800	1,800	-2,200*	300	2,100	600	2,000	1,900	2,300	13,800
Halifax	3,000	600	–	100	-1,200	1,300	4,000	7,000*	3,900	5,900	2,700	1,700	1,300	-1,200 –	28,900 *
Saint John	300	-1,200–	-600	-500	-1000	-100	1,500*	5,700*	-100	700	600	1,300*	200	-200	6,700 *
Chicoutimi–Jonquière	700	2,400*	800	300	–	300	1,600	100	400	1,700	-200	600	400	1000	10,000 *
Québec	1,300	6,400	300	3,700	-3,300–	700	12,900*	5,800	5,300	12,300	100	8,700	-11,300–	10,300	53,200
Sherbrooke	-900	1,000	2,000*	-1000	100	-700	1,400	2,200*	700	3,000	400	300	-600	-500	7,300 –
Trois-Rivières	900	300	200	-600	-800	-200	800	1,200	1,600*	2,700*	200	1000	–	-1,500 –	5,800 *
Montréal	19,700	40,200	-13,900	8,400	9,900	1,200	63,400*	23,600	32,700	55,200	22,600	28,000	1,200	6,300	295,600 *
Ottawa–Hull	4,600	10,700	1,700	-9,300 –	-800	1,700	31,300*	13,600	5,800	12,700	4,900	6,200	7,600	17,400	108,100
Kingston	-200	-900	-800	200	–	400	-400	1,700*	300	1,300*	–	–	-300	-1,000	200
Oshawa	3,300	6,800	100	1000	2,600	-1,600	4,500	3,800	6,200*	5,600	2,100	4,600	600	3,500	43,100 *
Toronto	33,900	38,300	35,900	3,500	41,500	300	114,700*	55,300	21,100	48,300	21,300	37,500	31,400	-4,900	478,200 *
Hamilton	5,600	3,400	2,500	1,700	5,000	300	10,600*	5,000	4,900	8,200	4,700	6,500	3,200	3,300	64,500 *
St. Catharines–Niagara	400	3,400	2,200	1,700	–	-900	1,300	5,200*	2,500	10,200*	7,300*	7,900*	-500	-600	40,100 *
Kitchener	200	1,800	1,600	1,500	5,700	1,100	7,500*	5,300	5,600	4,000	3,600	700	1,400	1,900	41,800 *
London	1,700	-2,900–	-700	-1,500	500	1,800	2,600	5,400*	4,000	5,700	1,800	1,900	-800	1,300	20,700
Windsor	2,100	3,300	-500	-500	100	1,400	2,100	1,300	3,800	4,200	4,400*	2,000	800	-2,200 –	22,300 *
Sudbury	1000	-2,500–	1,000	–	-900	-100	900	2,200*	500	3,300*	500	300	200	-100	6,200 *
Thunder Bay	-400	300	-1,200–	-200	–	-400	200	1,600*	-200	2,800*	1,200	600	-300	-300	3,700 *
Winnipeg	1,900	-2,700	-5,800–	-1,900	100	-1,400	7,300	7,100	4,200	9,300	5,300	5,800	3,500	-1,000	31,600 *
Regina	300	-1,200–	-800	1000	1,900	200	2,800*	1,500	2,300	2,000	800	2,900*	-500	-100	13,100 *
Saskatoon	1,700	1,300	500	400	1,400	400	2,300	2,100	3,300	3,500	800	4,400*	-900	-500	20,600 *
Calgary	9,400	14,200–	10,700	10,300	6,700	2,500	33,300*	10,400	8,600	20,200	4,000	20,600	9,800	-1,400	159,400
Edmonton	5,500	10,200	5,700	-1,300	500	100	13,600	12,900	5,100	11,100	3,100	16,000	7,400	-5,400 –	84,300 –
Abbotsford	400	2,400	900	300	600	200	2,500*	1,800	1000	1,700	1,000	1,100	1,300	700	15,900
Vancouver	15,800	18,000–	14,000	9,000	11,900	7,800	36,900	28,100	34,800	35,700	17,100	26,800	11,500	11,600	279,000 *
Victoria	2,400	2,800	-200	-800	600	-1,100	4,800*	3,700	3,400	3,400	1,300	5,400*	2,200	-2,200 –	25,800 *
All CMAs	114,100	157,200	56,000	25,700	79,700	15,900	365,400*	215,700	162,000	276,700	112,200	194,700	70,700	36,600	1,882,500 *
Non CMAs	34,900	100,300	46,500	-4,100	17,400	7,600	79,500	86,600	55,500	176,900	46,000	83,100	18,900	-19,300	729,800 *
All Canada	149,000	257,400	102,500	21,600	97,000	23,500	944,900	302,000	217,400	453,600	158,200	277,800	89,600	17,300	2,611,800 *

1. Includes management of companies and enterprises.
Note: numbers are rounded to the nearest 100.
Numbers denoted by the symbol "–" indicate industries where employment growth was weak, yielding a decline in that industry's share in the CMA by 2% or more. Numbers denoted by the symbol "*" indicate industries where employment growth was strong, yielding a rise in that industry's share in the CMA by 2% or more.
Source: LFS, 1989–2003.

Table 5.5: Services-producing industries comprising at least 50% of all services-producing employees in 2003

		Share of services-producing workers		Number of workers		
	Services-producing industries	2003	1989	2003	1989	% growth, 1989 to 2003
Montréal	Professional, scientific, and technical services	9.8	6.8	138,100	74,700	85.0
	Educational services	9.0	8.4	125,700	93,100	35.1
	Food services and drinking places	6.1	5.4	85,800	59,200	44.8
	Hospitals	5.3	6.0	74,900	66,300	13.0
	Social assistance	4.6	2.5	64,400	27,500	134.3
	Administrative and support services	4.4	3.3	61,700	36,800	67.8
	Food and beverage stores	3.9	3.9	54,600	42,900	27.4
	Credit intermediation and related activities	3.3	3.8	46,300	41,600	11.5
	Ambulatory health care services	2.7	2.4	38,200	26,600	43.6
	Local, municipal, and regional public administration	2.4	3.2	33,700	35,100	-4.0
	Other services-producing industries	48.4	54.4	679,900	601,100	13.1
	Total, services-producing industries	100.0	100.0	1,403,600	1,104,900	27.0
Toronto	Professional, scientific, and technical services	12.8	9.3	259,000	144,300	79.5
	Educational services	7.5	8.4	151,000	129,900	16.3
	Administrative and support services	6.2	4.5	124,600	69,700	78.8
	Food services and drinking places	5.9	5.6	119,200	86,300	38.2
	Credit intermediation and related activities	4.9	4.7	100,000	73,100	36.8
	Food and beverage stores	3.5	3.3	70,200	51,000	37.6
	Ambulatory health care services	3.4	3.2	69,000	49,900	38.3
	Hospitals	3.2	4.3	65,200	65,600	-0.7
	Social assistance	2.5	1.9	49,800	29,100	71.2
	Real estate	2.4	3.0	49,400	46,900	5.3
	Other services-producing industries	47.7	51.7	964,600	798,000	20.9
	Total, services-producing industries	100.0	100.0	2,021,900	1,543,700	31.0
Vancouver	Professional, scientific, and technical services	10.9	9.8	99,500	62,600	59.0
	Educational services	8.7	7.1	79,900	45,100	77.1
	Food services and drinking places	7.7	7.2	70,400	45,300	53.6
	Administrative and support services	4.9	3.0	44,800	19,000	136.5
	Hospitals	4.4	4.6	40,300	29,500	36.6
	Food and beverage stores	4.0	3.7	36,500	23,300	56.7
	Ambulatory health care services	3.0	3.0	27,500	19,000	44.3
	Credit intermediation and related activities	2.9	4.4	26,900	27,700	-2.9
	Social assistance	2.5	1.9	23,000	12,000	90.9
	Real estate	2.5	2.5	22,700	15,600	45.7
	Other services-producing industries	48.5	52.9	443,800	336,700	31.8
	Total, services-producing industries	100.0	100.0	915,400	636,400	43.8

Note: Numbers are rounded to the nearest 100.
Source: Labour Force Survey, 1989, 2003.

Table 5.6: Goods-producing industries comprising at least 50% of all goods-producing employees in 2003

		Share of goods-producing workers		Number of workers		
	Goods-producing industries	2003	1989	2003	1989	% growth, 1989 to 2003
Montréal	Trade contracting	12.5	10.7	48,900	46,800	4.4
	Clothing manufacturing	9.3	11.2	36,300	49,300	-26.3
	Food manufacturing	7.7	5.0	30,100	22,100	36.4
	Transportation equipment	7.5	7.4	29,300	32,300	-9.2
	Printing and related support activities	6.2	3.7	24,300	16,100	50.9
	Prime contracting	6.2	7.6	24,200	33,500	-27.9
	Chemical manufacturing	6.1	7.4	24,100	32,300	-25.4
	Other goods-producing industries	44.6	47.0	174,900	206,000	-15.1
	Total, goods-producing industries	100.0	100.0	392,300	438,600	10.6
Toronto	Trade contracting	16.3	13.6	106,800	81,900	30.4
	Transportation equipment	10.7	8.2	70,300	49,100	43.1
	Prime contracting	7.6	8.1	49,600	48,400	2.5
	Food manufacturing	6.7	6.1	44,000	36,600	20.1
	Plastics and rubber products manufacturing	5.9	4.1	38,900	24,800	57.2
	Computer and electronic product manufacturing	5.9	6.5	38,400	39,100	-1.8
	Other goods-producing industries	46.8	53.4	306,800	321,200	-4.5
	Total, goods-producing industries	100.0	100.0	655,000	601,200	8.9
Vancouver	Trade contracting	19.6	22.3	38,200	36,300	5.2
	Food manufacturing	10.5	6.4	20,500	10,500	96.6
	Prime contracting	10.0	12.6	19,500	20,500	-4.6
	Wood product manufacturing	5.7	7.1	11,200	11,500	-2.7
	Fabricated metal products	4.6	4.0	8,900	6,600	35.5
	Other goods-producing industries	49.7	47.6	97,000	77,400	25.3
	Total, goods-producing industries	100.0	100.0	195,400	162,800	20.1

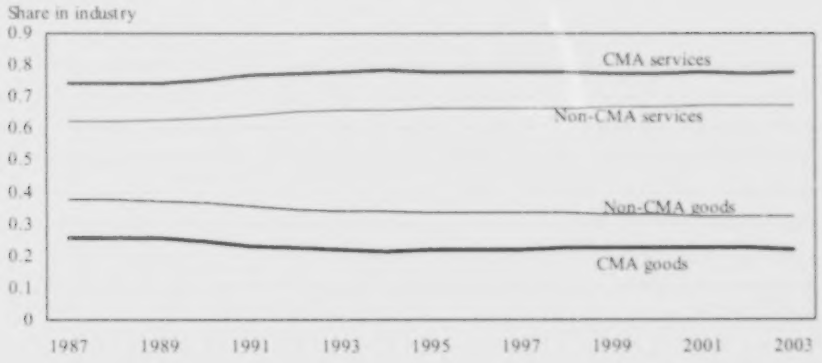
Note: Numbers are rounded to the nearest 100.
Source: Labour Force Survey, 1989, 2003.

Table 5.7: Diversity Index by CMA, 1986-2001

	Population (2001)	Diversity index, Toronto (1986=100)				
		1986	1991	1996	2001	Percent change, 1986 to 2001
Toronto	4,682,897	100.0	92.7	84.5	80.9	-19.1
Montréal	3,426,350	93.6	92.1	82.7	81.0	-13.5
Vancouver	1,986,965	86.2	87.5	79.7	76.3	-11.5
Largest CMAs	**10,096,212**	**95.1**	**91.5**	**82.9**	**80.0**	**-15.9**
Ottawa–Hull	1,063,664	45.2	47.3	46.2	44.0	-2.6
Calgary	951,395	71.2	74.8	74.8	72.5	1.9
Edmonton	937,845	75.1	77.7	77.4	75.8	0.9
Québec	682,757	57.9	59.4	58.6	59.8	3.3
Winnipeg	671,274	77.6	75.1	73.9	71.7	-7.6
Hamilton	662,401	79.8	79.2	76.4	76.0	-4.7
Mid-sized CMAs	**4,969,336**	**66.5**	**68.0**	**67.0**	**65.6**	**-1.3**
London	432,451	77.2	73.0	69.6	70.6	-8.5
Kitchener	414,284	86.1	87.5	79.5	78.4	-8.9
St. Catharines–Niagara	377,009	75.8	76.6	71.4	70.1	-7.5
Halifax	359,183	60.0	60.3	58.6	61.8	3.0
Victoria	311,902	56.2	58.7	54.4	53.5	-4.8
Windsor	307,877	53.6	58.0	49.8	48.4	-9.7
Oshawa	296,298	58.7	64.0	64.8	67.5	15.0
Saskatoon	225,927	70.8	68.0	68.2	66.2	-6.4
Regina	192,800	63.8	64.6	62.4	59.2	-7.3
St. John's	172,918	54.4	54.3	52.5	55.4	1.7
Sudbury	155,601	49.5	54.1	52.4	54.1	9.3
Chicoutimi–Jonquière	154,938	52.8	54.4	52.1	57.9	9.6
Sherbrooke	153,811	67.2	68.7	62.3	66.3	-1.3
Abbotsford	147,370	62.1	72.0	65.4	63.2	1.7
Kingston	146,838	53.4	53.5	52.4	53.0	-0.8
Trois-Rivières	137,507	64.2	67.8	64.7	66.8	4.0
Saint John	122,678	66.6	63.2	62.8	60.9	-8.5
Thunder Bay	121,986	59.6	61.6	60.7	58.2	-2.4
Smaller CMAs	**4,231,378**	**65.2**	**66.4**	**62.9**	**63.2**	**-2.9**

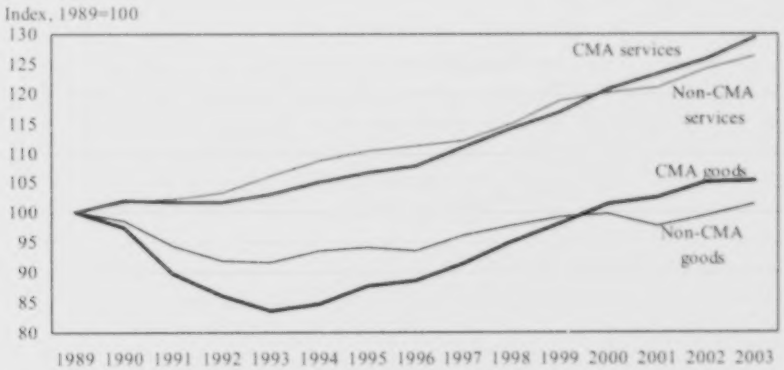
Source: Census, 1986–2001.

Figure 5.1: Employment shares in goods- and services-producing industries



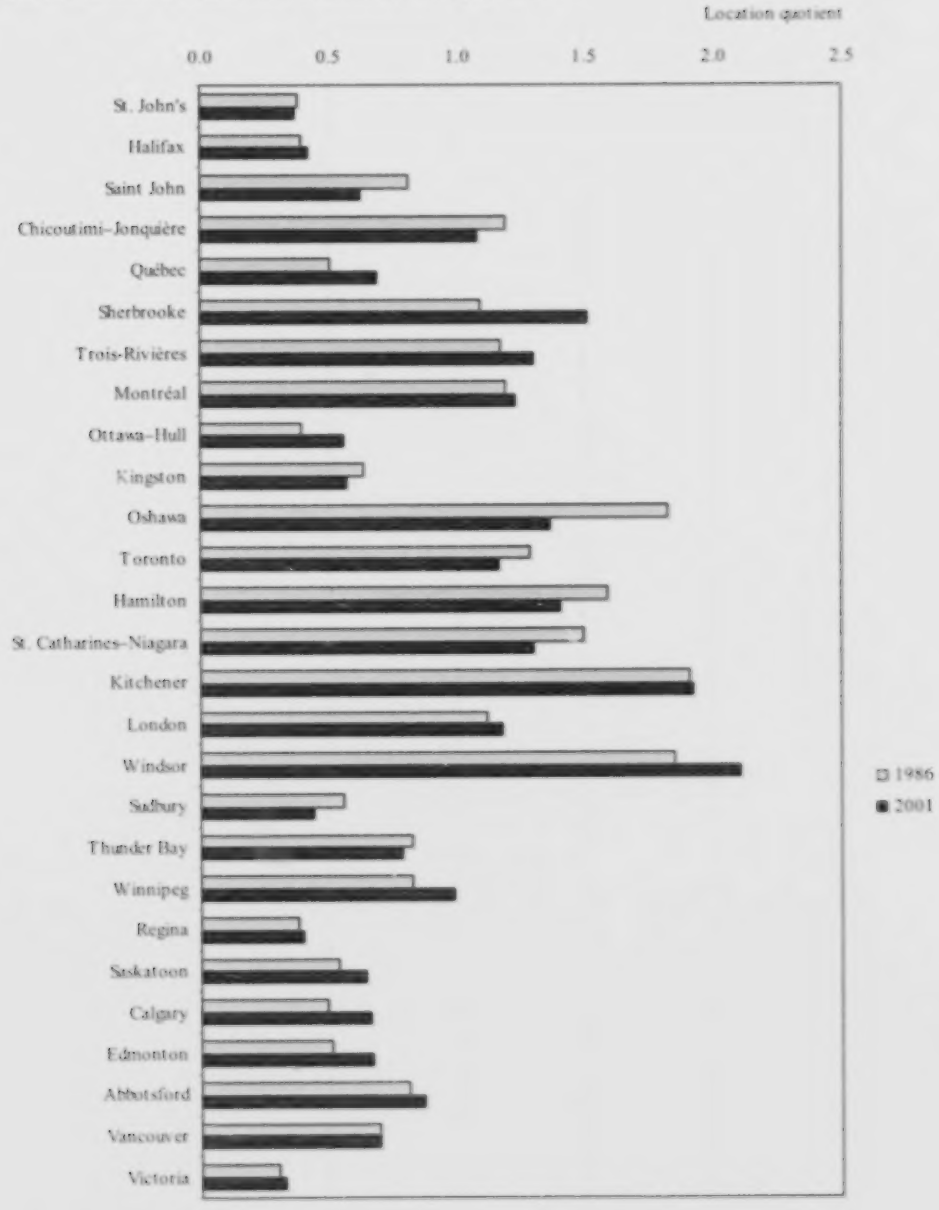
Source: Labour Force Survey, 1987-2003.

Figure 5.2: Employment growth in goods- and services-producing industries



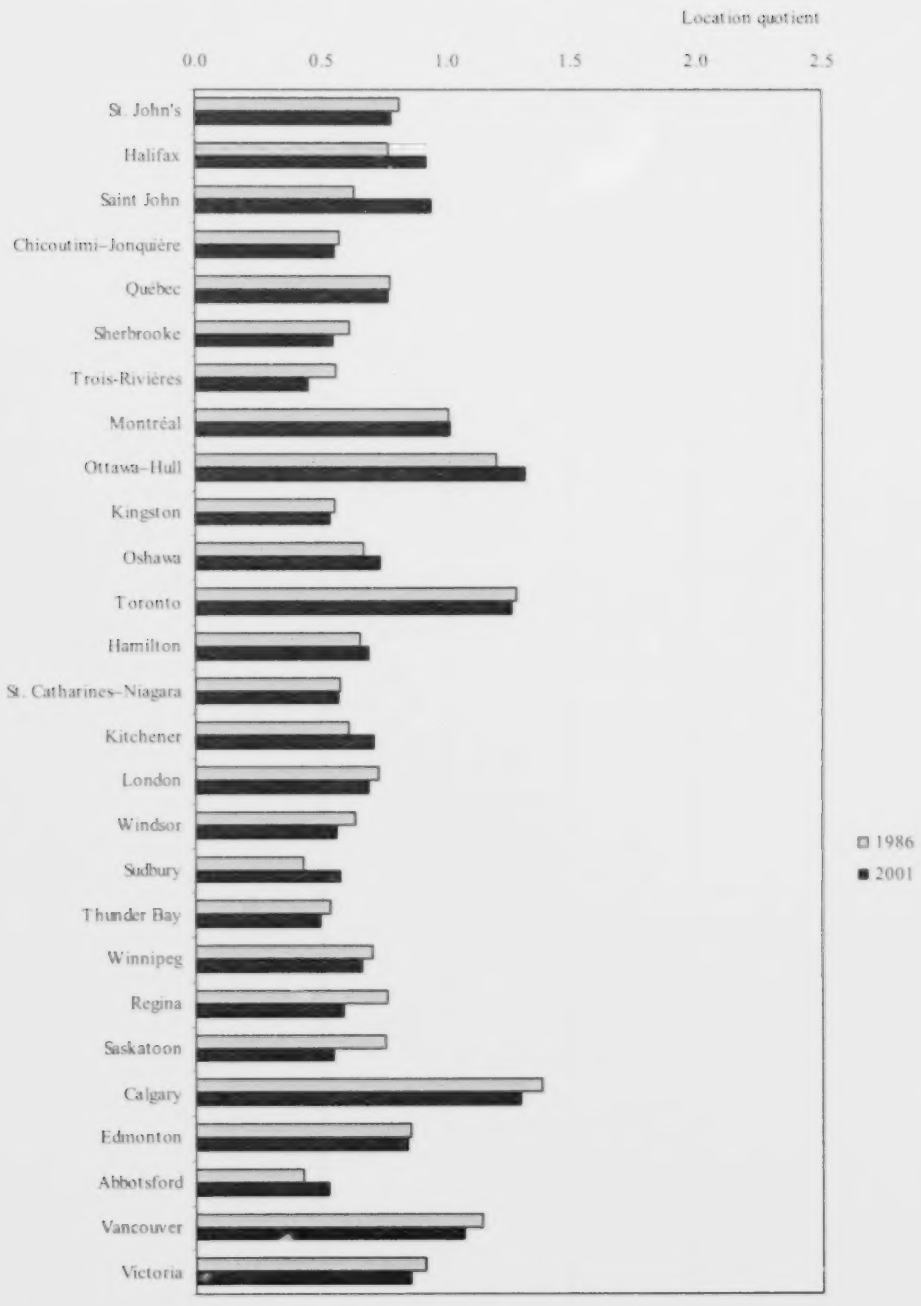
Source: Labour Force Survey, 1989-2003.

Figure 5.3: Relative concentration of manufacturing by CMA



Source: Census, 1986, 2001.

Figure 5.4: Relative concentration of business services by CMA



Source: Census 1986, 2001.

Chapter 6

Business creation, firm size and self-employment

For some, the development of small businesses is seen as a leading indicator of the economic vitality of a community. Government and municipal entrepreneurship policies often focus on the development of small and medium enterprises. For others, the expansion of businesses is also an important issue. Hence, this section develops a number of indicators about business birth rates and the share of small, medium, and large businesses in Canadian CMAs. It also provides indicators on the economic contribution of quickly growing firms to CMAs. Finally, self-employment is a reflection of entrepreneurial activity in a region. Accordingly, this section examines the self-employed labour force in CMAs.

6.1 In most CMAs, about 50% of firms in 2000 were born after 1995

Table 6.1 shows the proportion of businesses in 2000 that were born after 1995 using the Small Area File of Statistics Canada.[24] The birth rate is defined as the share of existing firms in 2000 that were born between 1995 and 2000. These "birth rates" show the extent to which firms were recently created and can be seen as a good indicator of business dynamics in CMAs. Table 6.1 also shows the proportion of employees in firms that were born during the period.

Birth rates did not vary substantially across CMAs. In most CMAs, firms born after 1995 accounted for up to 55% of all firms in 2000. These "new" businesses employed approximately 20% of workers in most CMAs.

6.2 Most CMA workers were employed in small and medium workplaces, but more workers were employed in large establishments[25] in manufacturing-oriented CMAs

In 2003, small workplaces—which we define as establishments with less than 20 workers—employed 31.6% of all CMA workers, compared to 42.1% of workers in non-CMAs (Table 6.2). This suggests that working establishments are typically smaller outside major metropolitan areas.

Interestingly, smaller workplaces employed a larger proportion of workers outside central Canada. CMAs in Atlantic Canada, Northern Ontario, and in western Canada generally had more individuals working in smaller workplaces. In the West, the share of employment in establishments with less than 20 employees was especially large in British Columbia CMAs, where approximately 4 in 10 workers earned a living in smaller workplaces in 2003.

The proportion of workers in large establishments (with more than 500 employees) was much larger in CMAs (14.3%) than in non-CMAs (8.4%). This proportion was highest in central Canada—especially in Quebec, where it exceeded 15% in all CMAs.

24. The last year of data available in the Small Area File is 2000.
25. The establishment, as a statistical unit, is defined as the most homogeneous unit of production for which the business maintains accounting records from which it is possible to assemble all the data elements required to compile the full structure of the gross value of production (total sales or shipments, and inventories), the cost of materials and services, and labour and capital used in production. Many firms do have only one establishment, but firms can also have several establishments. Hence, its measure is not necessarily representative of the firm as a whole, but can be seen as a reliable estimate of the presence of a specific firm in a given location.

The share of workers employed in large establishments was positively correlated with the share of manufacturing workers (Figure 6.1). This is consistent with the view that manufacturing industries typically concentrate their operations in large locations.

Figure 6.1 also shows some exceptions to this rule. The first is Ottawa–Hull, which has the largest share of workers in large firms of all CMAs despite its very small manufacturing sector—possibly because of its large public administration sector with its single large employer. The second is agriculture-oriented Abbotsford, which has the lowest share of workers in large establishments of all CMAs.[26]

6.3 Quickly growing firms employed a larger proportion of the workforce in St. John's, Calgary, Toronto, and Ottawa–Hull

How quickly businesses are growing, declining, coming into existence, and going out of existence is another important aspect of understanding local business activity. During the 1990s, some industry sectors and many individual businesses experienced high rates of growth. These "gazelles" are often seen as an indicator of a healthy, growing economy.

This section defines "gazelles" as firms that more than doubled in employment between 1995 and 2000. The proportion of quickly growing firms in CMAs, and the proportion of the workforce employed in such firms is shown in Table 6.3. The proportion of quickly growing firms varied between 12% and 15% in most CMAs. The proportion of gazelles appeared to be relatively smaller in Victoria (9.9%), Sudbury (10.3%), and Thunder Bay (10.7%).

In terms of employment, the highest proportion of employees working in gazelles could be found in St. John's, Edmonton, Toronto, and Ottawa–Hull, which all employed over a third of their workforces in quickly growing firms. The proportion of workers employed in gazelles was lower in Kingston (16.5%), Thunder Bay (17.2%), Regina (19.1%), and Saskatoon (20.4%).

6.4 The share of self-employed workers increased in almost all CMAs over the last two decades

Self-employed workers can be defined as working owners of incorporated and non-incorporated business, farm, or professional practice. In 2001, 15.1% of workers in non-CMAs were self-employed, compared to 11.1% in CMAs (Table 6.4). However, the proportion of self-employed workers increased much faster in CMAs than in non-CMAs over the last two decades.

Between 1981 and 2001, the proportion of working owners of business, farm, or professional practice substantially increased in almost all CMAs. The only exception is Abbotsford, which already had a relatively large portion of self-employed in 1981. Comparing 1981 and 2001, CMAs with the highest and lowest self-employment rates tended to be the same. All three British Columbia CMAs (Victoria, Vancouver, and Abbotsford) were on top of the list of CMAs with the most self-employed workers in 1981, 1991, and 2001. However, the proportion of self-employed workers increased faster in Ottawa–Hull, which climbed from 22nd highest in 1981 to 13th highest in 2001. By contrast, the share of self-employed workers grew more slowly in Windsor (from 14th to 25th highest) and St. John's (from 17th to 26th highest).

Self-employment rates varied quite significantly across regions. The rates were larger and grew faster in Alberta and in British Columbia, but fewer workers owned their own businesses in Atlantic CMAs. The proportion of self-employed workers also typically grew faster in larger CMAs.

26. Abbotsford still has a near-to-average share of workers in manufacturing firms, indicating that manufacturing in Abbotsford must be concentrated among small firms.

Table 6.1: Businesses birth rates, 1995-2000

	Birth rates	Employment share in new firms
St. John's	49.9	20.7
Halifax	50.3	20.6
Saint John	49.1	22.3
Chicoutimi–Jonquière	51.9	23.7
Québec	46.4	18.8
Sherbrooke	48.3	22.8
Trois-Rivières	48.6	24.4
Montréal	46.9	21.2
Ottawa–Hull	53.1	18.0
Kingston	48.3	18.2
Oshawa	56.1	27.0
Toronto	49.1	18.7
Hamilton	52.1	21.2
St. Catharines–Niagara	45.1	19.7
Kitchener	50.2	20.9
London	46.5	23.0
Windsor	46.2	21.4
Sudbury	45.5	28.4
Thunder Bay	43.9	17.5
Winnipeg	43.0	14.6
Regina	44.2	16.6
Saskatoon	46.5	18.4
Calgary	55.1	21.4
Edmonton	52.2	20.1
Abbotsford	54.7	31.0
Vancouver	48.6	22.6
Victoria	47.0	27.7

Source: Longitudinal Employment Analysis Program, Small Area File.

Table 6.2: Distribution of workers by establishment size, 2003

	Less than 20 workers	Between 20 and 99 workers	Between 100 and 500 workers	More than 500 workers
			%	
St. John's	38.3	31.2	20.8	9.7
Halifax	36.3	34.4	18.0	11.2
Saint John	33.4	31.9	24.6	10.1
Chicoutimi–Jonquière	34.9	26.7	16.0	22.5
Québec	30.7	28.6	23.7	17.0
Sherbrooke	32.5	28.7	20.5	18.3
Trois-Rivières	33.5	30.6	19.5	16.4
Montréal	29.6	31.7	22.5	16.2
Ottawa–Hull	27.8	27.6	19.8	24.8
Kingston	36.4	28.5	23.7	11.3
Oshawa	28.0	31.4	22.8	17.7
Toronto	27.5	33.8	25.1	13.6
Hamilton	31.0	31.0	20.4	17.7
St. Catharines–Niagara	33.2	32.6	19.5	14.6
Kitchener	27.8	31.1	24.7	16.4
London	31.4	27.9	21.0	19.7
Windsor	26.8	30.5	19.2	23.6
Sudbury	37.0	30.8	20.5	11.6
Thunder Bay	36.0	27.6	24.8	11.6
Winnipeg	29.2	32.3	22.2	16.3
Regina	34.1	31.4	25.0	9.5
Saskatoon	37.6	33.3	19.1	10.0
Calgary	35.7	32.4	20.0	12.0
Edmonton	37.5	34.9	19.2	8.3
Abbotsford	40.5	40.4	16.2	2.9
Vancouver	38.7	34.1	18.6	8.6
Victoria	41.5	33.4	18.4	6.8
All CMAs	31.6	32.2	21.9	14.3
Non-CMAs	42.1	30.9	18.5	8.4

Note: Excludes self-employed workers and unpaid family workers.
Source: Labour Force Survey, 2003.

Table 6.3: Proportion of firms and employment in quickly growing firms, 1995–2000

	Proportion of gazelles[1] 1995-2000 (% of firms)	Employment in gazelles[1] 1995-2000 (% of employment)
St. John's	14.2	39.7
Halifax	14.3	32.4
Saint John	12.7	28.0
Chicoutimi–Jonquière	13.2	29.2
Québec	13.6	24.6
Sherbrooke	12.9	28.2
Trois-Rivières	12.8	29.8
Montréal	14.6	31.5
Ottawa–Hull	13.6	33.4
Kingston	11.6	16.5
Oshawa	13.0	29.7
Toronto	14.6	33.9
Hamilton	13.4	26.5
St. Catharines–Niagara	13.5	29.5
Kitchener	15.2	32.0
London	13.9	28.8
Windsor	14.3	32.2
Sudbury	10.3	30.4
Thunder Bay	10.7	17.2
Winnipeg	13.1	22.0
Regina	12.2	19.1
Saskatoon	13.5	20.4
Calgary	14.2	35.4
Edmonton	13.4	30.2
Abbotsford	11.7	28.7
Vancouver	11.5	28.5
Victoria	9.9	25.4

[1] A "gazelle" is a firm that has more than doubled its employment between 1995 and 2000.

Source: Statistics Canada, Longitudinal Employment Analysis Program, Small Area File.

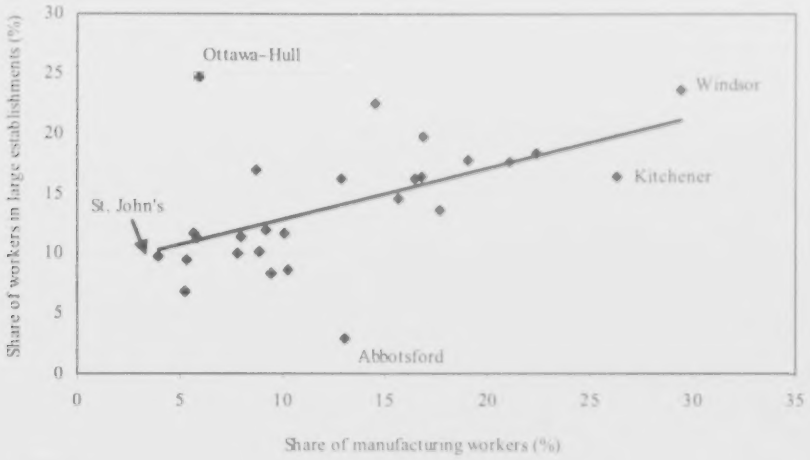
Table 6.4: Share of self-employed workers, all CMAs[a]

	1981		1991		2001	
	%	Rank	%	Rank	%	Rank
Victoria	8.8	2	11.4	2	14.7	1
Vancouver	8.8	2	11.2	3	14.0	2
Abbotsford	14.3	1	12.2	1	13.8	3
Calgary	7.7	4	9.7	5	12.6	4
Toronto	7.4	6	9.6	6	12.0	5
Saskatoon	7.5	5	10.6	4	11.6	6
Kingston	7.4	6	8.5	11	11.5	7
Edmonton	7.3	8	9.4	7	11.1	8
London	7.2	10	8.3	13	10.8	9
Montréal	6.9	11	9.0	8	10.4	10
Sherbrooke	7.3	9	9.0	8	10.3	11
Regina	6.8	12	8.7	10	10.1	12
Hamilton	6.1	18	7.4	16	9.9	13
Ottawa–Hull	5.8	22	7.8	14	9.9	13
St. Catharines–Niagara	6.8	12	8.4	12	9.9	13
Kitchener	6.3	15	7.7	15	9.2	16
Winnipeg	6.3	15	7.4	16	9.1	17
Halifax	5.7	23	6.5	20	9.1	17
Trois-Rivières	5.9	21	7.4	16	9.0	19
Oshawa	5.0	26	6.0	26	8.9	20
Québec	6.0	19	7.0	19	8.6	21
Sudbury	5.4	24	6.3	23	8.4	22
Thunder Bay	6.0	19	6.5	20	8.1	23
Saint John	4.7	27	5.6	27	7.9	24
Windsor	6.7	14	6.5	20	7.4	25
St.John's	6.2	17	6.1	25	7.3	26
Chicoutimi–Jonquière	5.4	24	6.3	23	7.1	27
All CMAs	7.1	–	8.9	–	11.1	–
Non-CMAs	13.9	–	13.6	–	15.1	–

a: Includes population 15+ only. Excludes non-permanent residents and institutional residents. Refers to labour force status in the week prior to the date of census collection. Includes incorporated and non-incorporated businesses.

Source: Census of Canada, 1981, 1991, 2001.

Figure 6.1: Share of workers in manufacturing and in large workplaces (more than 500 workers), 2003



Source: Labour Force Survey, 2003.

Chapter 7

The computer and telecommunications sector

How did cities position themselves with respect to the "computer and telecommunications" (CT) sector? The CT sector often provides well-remunerated and high value-added jobs, and generally includes more knowledge workers than many other sectors of the economy. In fact the CT sector formed the core of what most analysts termed the "knowledge-based" or "new" economy over the 1990s and early 2000s. Hence, the creation of jobs in this sector is a cornerstone of economic development strategies in many cities. This section examines the growth and concentration of the CT sector in CMAs. It is done separately from other industrial sectors because the CT sector is a special aggregation of goods and services industries (Box 7.1: Measurement of the CT sector).

7.1 The CT sector expanded faster than other sectors during the 1990s

Employment in the CT sector in all 27 CMAs combined was unchanged at 300,000 jobs between 1987 and 1993, rose to near 550,000 jobs by 2001, and declined slightly between 2001 and 2003 (Figure 7.1). The increase of employment of 72% between 1989 and 2003 contrasts with the overall increase observed in CMA employment of just over 20%. Between 2001 and 2003 employment in the CT sector in CMAs fell by about 50,000 jobs.

As noted by Bowlby and Langlois (2002), the boom and bust of the CT sector is not unique to the current economic cycle. During the 1990–92 recession, the labour market also contracted more sharply in the CT sector than in the economy as a whole.

The four largest CMAs (Toronto, Montréal, Vancouver, and Ottawa–Hull) comprised 56% of all CT employment in 2003 (compared to 29% of all CMA employment). While the large CMAs account for the most CT employment, they also bear the brunt of that sector's cyclical fluctuations. Large CT losses during the recession of 1990–92 were seen in Toronto, while each of the largest four CMAs lost CT employment in recent years (Figure 7.2). This is compared to the remaining CMAs, which (as a group) lost little CT employment either in the 1990–92 recession, or in recent years.

Other measures of CT employment also tend to demonstrate that the CT sector is overly represented in a few large urban areas. Using a definition of CT that includes firms where "investments in scientific knowledge are a relatively more important part of the production process," Beckstead et al. (2003) found that CT industries were mostly concentrated in large CMAs in 2000—especially Toronto, Montréal, Vancouver, and Ottawa–Hull, which together accounted for 69% of all CT employment in 2000. The authors conclude that "smaller cities and urban areas lag behind the national average, the degree of under-representation increasing as one moves progressively down the urban/rural continuum."

However, this level of concentration of the CT industry into the four largest CMAs may not be high by historical standards. Looking back to the mid 1980s, concentration of the CT sector in the four largest CMAs was nearly as high as at the 2001 peak concentration value[27] (Figure 7.3).

27. Another measure of industrial concentration, the Herfindahl Index, likewise shows that the CMA concentration of the CT sector may not be high by historical standards.

Between 1993 and 2001, 297,000 jobs were created in the CT sector, of which, 74% were created in the four largest CMAs. From 2001 to 2003, fully 60,000 jobs were lost in the CT sector, of which 77% were lost in the four largest CMAs. Hence, during the last business cycle, a relatively few CMAs generated a disproportionate amount of CT employment during the economic boom, but tended also to be the losers during the post 2001 economic downturn.

7.2 CMAs became more specialized in CT employment over the 1990s

From 1989 to 2001, most CMAs increased their specialization in the CT sector (Figure 7.4). The share of employment in the CT sector increased most in Ottawa–Hull, where it rose by 3.7 percentage points from 5.6% to 10.2% of the workforce. CT increased its share by more than 2 percentage points in six other CMAs, and more than 1 percentage point in seven other CMAs. The employment share of the CT sector declined only in eight CMAs (St. John's, Sherbrooke, Trois-Rivières, Kingston, Sudbury, Thunder Bay, Winnipeg and Saskatoon).

Regina, with 5.8% of its employment in CT in 2001, was the fourth most CT-specialized CMA in Canada. This underscores the fact that while the most CT employment was located in the larger centres of Toronto, Montréal, Vancouver, and Ottawa–Hull, other smaller CMAs have significant CT sectors. Halifax, Kitchener, and Saint John were three other smaller CMAs that had more than 4% of their employment in the CT sector at the peak of the CT boom in 2001. CT had a relatively small employment share in the non-CMA region, comprising just 1.6% of non-CMA employment in 2001.

After the 2001 downturn, the CT sector became less important in most CMAs; however, it is important to note that, as a fraction of employment in the CMA, it remained high in 2003 compared to 1989. In Ottawa–Hull, for example, the CT sector represented 8.4% of CMA employment in 2003, up from 5.6% in 1989.

7.3 CT services fuelled the CT expansion

The CT industry can be divided into those components related to manufacturing and those related to services. Most of the growth in the post-1993 expansion of the CT sector was in the CT services industries. From 1993 to the 2001 peak, more than 230,000 jobs were created in the CT services sector compared to about 40,000 in the CT-manufacturing sector (Figure 7.5).

Looking at the largest four CMAs (Figure 7.6), most of the increase in CT employment after 1993 was services-oriented, with CT manufacturing rising substantially only in Ottawa–Hull. In Ottawa–Hull, virtually all the post-2001 downturn in the CT sector was found in the CT manufacturing sector while the CT services sector maintained its 2001 peak employment through 2003.

At the same time, the CT services sector became more concentrated in the four largest CMAs (Figure 7.7). In 2003 nearly 55% of the CT services sector was found in the four largest CMAs compared to about 45% in 1993.

Box 7.1: Measurement of the CT sector

One approach of measuring information and communication technologies (ICT) industries is the "input based" method, which identifies ICT industries as those investing a certain level of investment in knowledge and human capital (see Beckstead et al., 2003, for details). Another possibility is to use an "output based" measure focusing on industries that are involved in the development, delivery, and support of advanced technological products and services. In 1998, the OECD developed a comprehensive list of output-related industries that should be included in the definition of the ICT sector. This definition was based on the International Standard Industrial Classification (ISIC, Rev. 3) and can be easily translated into a 5-digit NAICS classification (Statistics Canada, 2001a, 2001b). The LFS, however, provides data only at the 4-digit NAICS level. One alternative is to use the definition of computer and telecommunication (CT) industries, which is based on a list of 4-digit NAICS categories. Within the LFS, this definition can be used to track the evolution of CT industries since 1987. CT industries include the following categories of firms (with the corresponding 1997 NAICS classification):

A) CT manufacturing:
- Commercial and service industry machinery (3333)
- Computer and peripheral equipment (3341)
- Communications equipment (3342)
- Audio and video equipment (3343)
- Semiconductor and other electronic components (3344)
- Navigational, measuring, medical, and control instruments (3345)

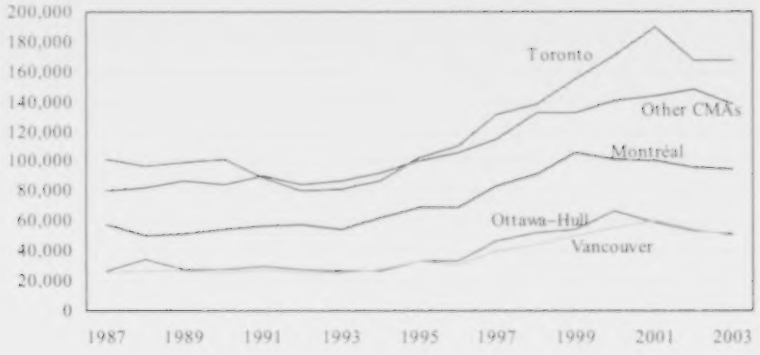
B) CT services:
- Computer and communications equipment & supplies wholesalers and distributors (4173)
- Software publishers (5112)
- Telecommunications (5133)
- Data processing (5142)
- Computer systems design and related services (5415)
- Electronic and precision equipment repair and maintenance (8112)

This sector has been used in other studies (Vaillancourt [2003]; Bowlby and Langlois, 2002, to approximate the number of employees involved in information and communication technologies (ICT). According to Bowlby and Langlois (2002), CT industries comprise approximately 88% of employment in all ICT industries.

Figure 7.1: Employment in the CT sector, all CMAs

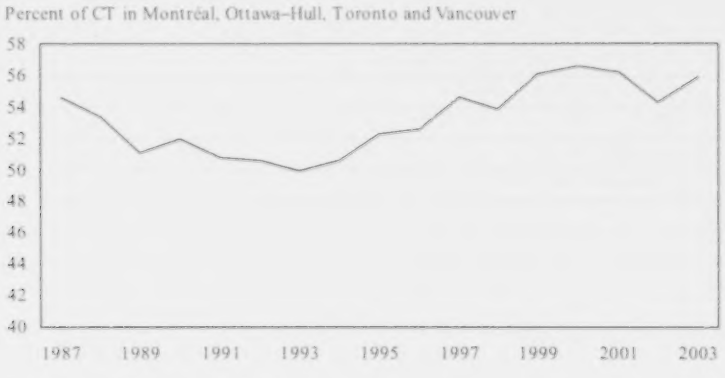
Source: Labour Force Survey, 1987–2003.

Figure 7.2: Employment in the CT sector, selected CMAs



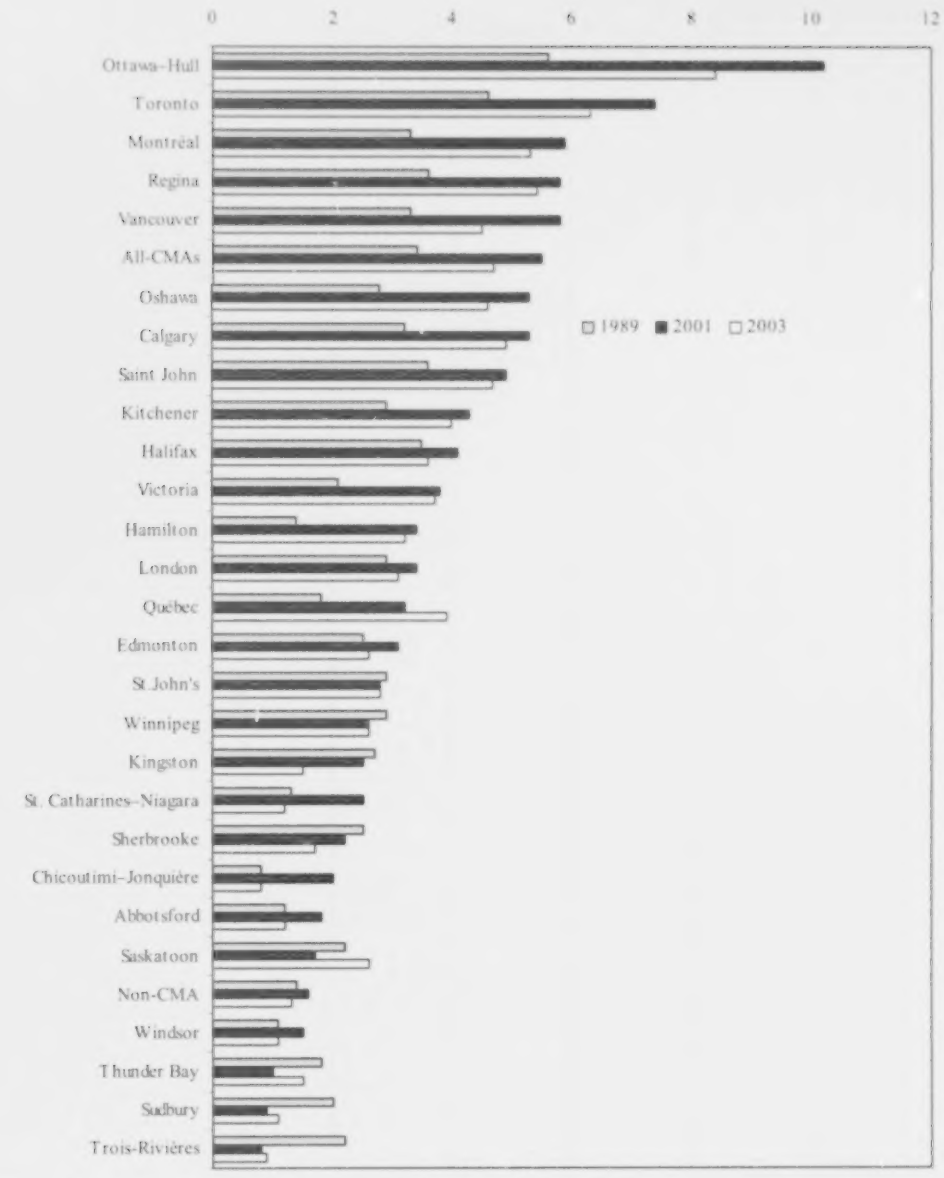
Source: Labour Force Survey, 1987–2003.

Figure 7.3: Percent of CT industry in top four CMAs



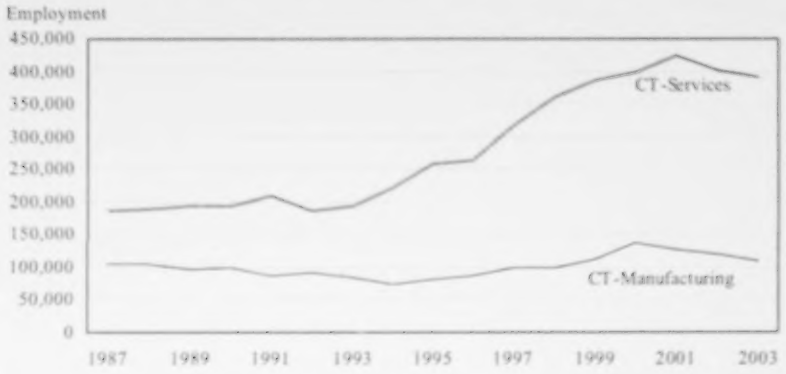
Source: Labour Force Survey, 1987–2003.

Figure 7.4: Share of employment in CT sector



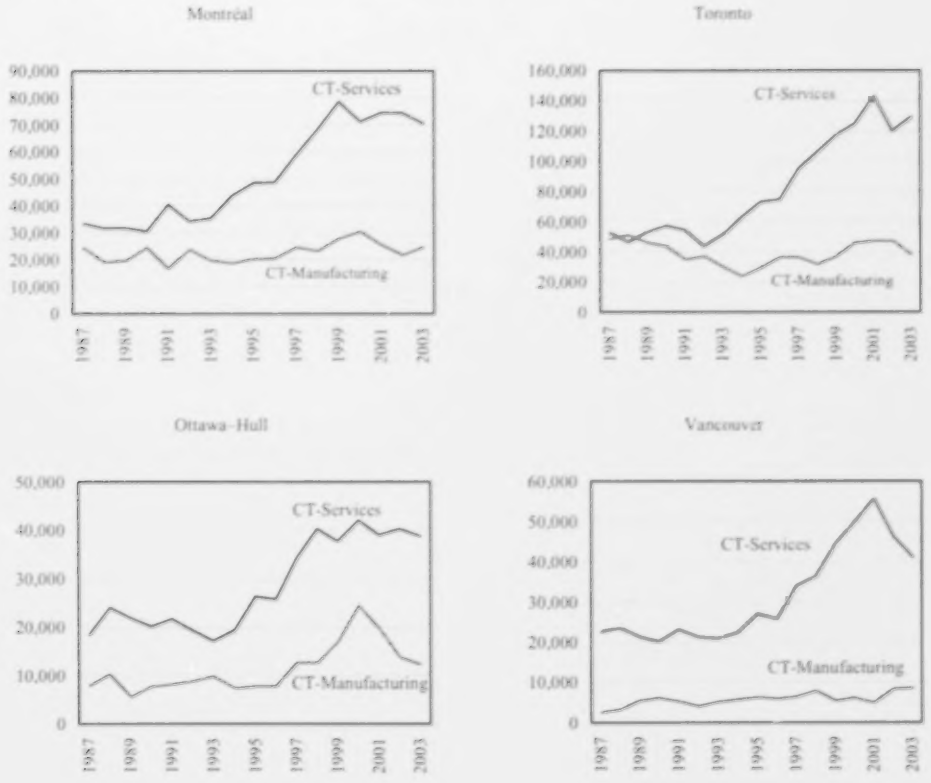
Source: Labour Force Survey, 1989, 2001, 2003.

Figure 7.5: Employment in CT manufacturing and CT services sectors, all 27 CMAs combined



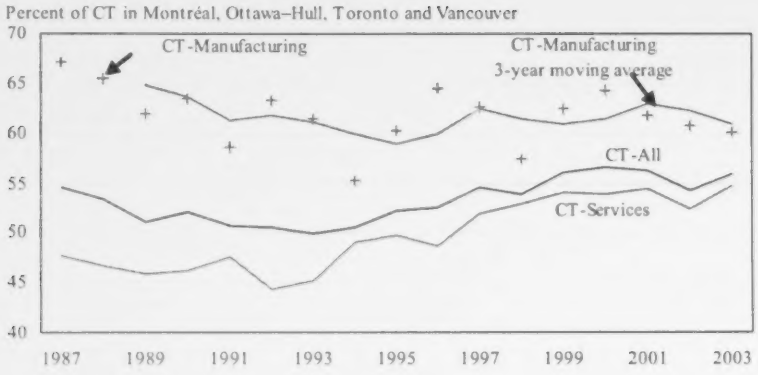
Source: Labour Force Survey, 1987–2003.

Figure 7.6: Employment in CT services and manufacturing, selected CMAs



Source: Labour Force Survey, 1987–2003.

Figure 7.7: Percent of CT industry in top 4 CMAs



Source: Labour Force Survey, 1987-2003.

Part 3

Population growth and mobility in CMAs

Chapter 8

Population growth in CMAs

As noted at the outset of this report, population growth lies at the centre of economic growth. A CMA has three major sources of population growth, these are natural increase (births minus deaths), international migration, and internal migration. This chapter examines the latter two of these population growth sources in some detail. In each census, Canadians are asked questions about where they lived 5 years ago. Using this question, in combination with information on year of immigration, allows one to build a profile of population growth at the CMA level. Does the CMA obtain its growth from immigration? Does the CMA gain (on balance) from internal migration?

Beyond examining these broad questions, one can also ask if the CMA gains or loses more in terms of human-capital stock. That is, do some CMAs tend to gain or lose highly educated migrants? Do some tend to gain or lose young migrants?

Finally, sorting out what internal mobility implies for economic conditions and disparities among regions has been the goal of a long-standing and well-developed literature.

Accordingly, the chapter begins by looking at population growth broadly, and then examines growth among particular groups—specifically the highly educated and young persons. This chapter ends by discussing some of the literature that describes the implications internal mobility has for local economic conditions and regional disparities.

8.1 Larger CMAs gained population from immigration

Table 8.1 decomposes 2001 CMA populations into (1) the part that immigrated to Canada since 1996, (2) the part that lived in another CMA in 1996, and (3) the part that lived in a non-CMA in 1996. The shares of the population comprising immigrants, as well as those comprising internal migrants, can be thought of as the growth in the CMA that was associated with these components.[28] Population flows to or from CMAs and non-CMAs are measured on a net-flows rather than a gross-flows basis, thus they can be either positive or negative. A negative value can be interpreted as a real population loss in the CMA due to net emigration to other CMAs or non-CMAs.

In Canada, immigration is predominantly an urban phenomenon. In 2001 CMAs grew by 5.6% due to immigration between 1996 and 2001. In Toronto and Vancouver, Canada's two main gateway cities, recent immigrants accounted for population growth of 10% or more between 1996 and 2001. Montréal grew by about 4.3% between 1996 and 2001 as a result of immigration.

Immigration contributed strongly to growth in Calgary (4.6%), Ottawa–Hull (4.4%), and southern Ontario CMAs located west of Toronto between 1996 and 2001. In Windsor, immigration increased the population by about 5.4% between 1996 and 2001.

28. In fact these are approximations of the growth due to these components. Ideally one would want to decompose population growth in the CMA into the components associated with natural increase, immigration, and internal migration. Efforts to do this were prevented due to inconsistencies across the 1996 and 2001 Censuses.

Small CMAs received fewer immigrants in recent years, which translated into smaller contributions of immigrants to population growth. One exception was Abbotsford, where immigrants increased the population by 4.0% between 1996 and 2001.

Results from the Longitudinal Survey of Immigrants to Canada (*The Daily*, Thursday, September 4, 2003) shed some light on the question of why immigrants choose to settle where they do. The results highlight the fact that it is relatively uncommon for recent immigrants to choose their CMA of residence based upon economic considerations. In fact, most chose their destination because family and friends were already living there. However, this is less the case for those that settled in smaller CMAs, who were more likely to report economic considerations as a reason for choosing to live in that CMA.

8.2 Smaller CMAs lost population to other CMAs

For many CMAs, the population they lost to other CMAs was substantially larger than the population they gained. In Table 8.1 these CMAs show a negative net percentage share of population from internal migration from other CMAs. St. John's was the largest net loser of population to inter-CMA mobility. Altogether St. John's lost 4.5% more of its population to other CMAs than it gained in return (this amounts to about 7,780 people and reflects a real population decline). Sudbury lost 4.3% of its population in this manner, while Chicoutimi–Jonquière, Québec, Sherbrooke, Trois-Rivières, Thunder Bay, Regina, and Saskatoon each lost between 2% and 4% of their respective populations to inter-CMA mobility. In each case these losses to other CMAs were larger than any gains they made from immigration.

CMAs that lost population to other CMAs were predominantly smaller CMAs. Fully 9 out of 10 CMAs with a population under 200,000 lost population to other CMAs.

Some CMAs gained proportionately more people from other CMAs than it lost to other CMAs. These CMAs included Calgary, Oshawa, Hamilton, and Abbotsford. With the exception of Calgary, it is likely that these CMAs benefited from their close location to proximate, larger urban centres.

Net population gain from CMA mobility was negligible in Canada's largest CMAs. Toronto, Montréal, and Vancouver neither gained nor lost significantly to inter-CMA mobility.

In general, net flows from non-CMAs amounted to a smaller fraction of the population in CMAs. The CMAs that gained more than 2% from non-CMAs were Halifax, Calgary, and Edmonton.

Below, the report will briefly discuss some of the literature that seeks to unravel the causes and consequences of internal mobility.

8.3 CMAs losing population also lost more young and received fewer young immigrants

One possible source of concern for CMAs losing populations is that they might be losing their youngest population to other areas and receiving too little from immigration to compensate. Young persons may be more likely to move since their cost of moving may be lower. One reason for this would be that they have smaller families to relocate. Hence, it is useful to examine the growth in the populations of young individuals in the CMAs that was due to immigration or internal migration across the 1996 to 2001 period. Young persons are defined as those aged less than 30-years-old (in 2001) in order to abstract from mobility decisions related to post-secondary education.[29] Results are shown in Table 8.2.

29. Some CMAs will naturally attract more young persons than others because they are relatively concentrated in educational institutions. However, if students return to their home CMA after their education was complete, net flows in a given intercensal period should be about zero.

Immigrants are predominantly younger than the Canadian population at large, hence it is not surprising that immigrants increased the young population more than they did the whole population. For example, immigrants increased Toronto's population by 10.1% between 1996 and 2001, but it boosted its population under the age of 30 by 11.9%.

However, as with the data for the population at large, some CMAs lost large shares of their young population to other CMAs. St. John's, Chicoutimi–Jonquière, Sudbury and Thunder Bay each lost more than 7% of their population aged less than 30 to inter-CMA mobility. Sherbrooke, Trois-Rivières, and Kingston each lost between 5% and 7% of their population in this age group to inter-CMA mobility. In each of these cases the gains these CMAs made from immigration were too small to offset the losses to inter-CMA mobility; however, some CMAs, like Kingston, increased their youth populations from non-CMA sources.

Québec, Regina, and Saskatoon each lost more than 2% of their young populations to inter-CMA mobility, but gained enough from non-CMAs, and immigration to offset this loss.

Oshawa and Calgary gained the most young people from inter-CMA migration, while net gains or losses in Montréal, Toronto, and Vancouver CMAs were negligible.

Young people are more mobile than older and might be disproportionately seen among internal migrants. Indeed, CMAs that lost population to other CMAs as a result of inter-CMA mobility tended to lose disproportionately more young people (Figure 8.1). For example, Chicoutimi–Jonquière lost 3.9% of its population to other CMAs, but lost 7.9% of its population aged less than 30. However, CMAs that gained population from inter-CMA mobility did not gain disproportionately more young persons.

8.4 CMAs losing population lost more university graduates and received fewer university-educated immigrants

University graduates also tend to be more mobile than the population at large. Education increases the geographic size of a person's prospective labour market and reduces the relocation costs by reducing the likelihood of post-move unemployment. As discussed below, the emigration of highly educated migrants may be detrimental to the local economy as these migrants may take with them important sources of capital that are necessary for future growth. Table 8.3 shows the relative contribution of immigration and internal migration to the university-educated population of CMAs. In this section, we define university-educated people as those aged at least 30-years-old with at least a bachelor's degree in 2001 (in order to abstract from mobility decisions related to post-secondary school location).

The patterns of population growth and mobility observed among the population and young population were echoed among the university-educated population, with many of the same CMAs gaining and losing the largest shares. Recent immigrants are more likely to have a university education than others, so immigrants provided a major source of university graduates for immigrant-receiving CMAs. Toronto, Windsor, and Vancouver each increased their university-educated populations by more than 10% from immigrant sources between 1996 and 2001. Montréal, Ottawa–Hull, Hamilton, Kitchener, London, Calgary, Edmonton, and Abbotsford increased their university populations by more than 5% in this manner.

CMAs that lost more than 4% of their university-educated population to other CMAs include St. John's, Québec, Sudbury, Regina, and Saskatoon. Chicoutimi–Jonquière, Sherbrooke, Trois-Rivières, London, Thunder Bay, and Winnipeg each lost more than 2% of their university-educated population between 1996 and 2001. As was the case with young migrants, CMAs that lost population typically lost disproportionately more university graduates (Figure 8.2).

In all, these results emphasize the importance of immigration to CMA population growth, as well as growth in the educated and young population. The results also reveal that internal migration (which is an often overlooked component of population change) can be especially important in smaller CMAs.

8.5 Implications of mobility on economic conditions

A long-standing literature discusses the contribution of inter-regional mobility to economic conditions. The two views on the inter-regional mobility can be discussed with reference to Courchene (1970); Polèse (1981); and Osberg, Gordon, and Lin (1994). On one hand, inter-regional mobility can lead to a reduction in regional economic disparities. For that matter, higher wages or lower unemployment derived from higher labour demand in one region may encourage migrants from another region with lower wages, higher unemployment, and lower labour demand. The ensuing reallocation of labour will increase supply of labour in the high-demand region, and reduce excess supply of labour in the low-demand region, resulting in an equalization of wages and unemployment rates in the two regions. Accordingly, a substantial literature has focused on the disincentives to mobility implied by equalization and transfer payments.

On the other hand, inter-regional mobility can put a strain on regional disparities. This would occur if regions were exporting their "best and brightest." In this case, migrants take with them important sources of capital necessary for future growth in the region. The "have not" regions are then left with an older, less educated workforce, which reduces prospects for growth and enhances, over time, regional economic differences. The receiving region benefits from the capital embodied in these migrants, increasing regional disparities. Furthermore, emigration reduces local demand for goods in source regions through reduction in consumer spending (plus any regional multiplier effects). In this sense, inter-regional migration can exacerbate regional disparities, leading to the hollowing out of important sources of capital in lower income regions.

Also important for the present discussion are the factors that drive inter-regional mobility. Numerous empirical studies have shown that mobility rates are virtually always positively related to regional wage and unemployment differentials. As we have seen in the descriptive results posted above, other important factors are the age and education level of the migrant. However, there remains no consensus on what influence equalization and transfer payments have on mobility.

Table 8.1: Recent immigrants[a] and internal migrants as a share of the population, 2001[b]

	Total population	% of 2001 population		
		Recent immigrants	Internal migration	
			CMAs	Non-CMAs
St. John's	172,900	0.7	-4.5	1.5
Halifax	359,200	1.8	-0.4	2.5
Saint John	122,700	0.8	-1.1	-0.7
Chicoutimi–Jonquière	154,900	0.3	-3.9	0.3
Québec	682,800	1.1	-2.8	1.0
Sherbrooke	153,800	1.9	-2.7	1.8
Trois-Rivières	137,500	0.5	-2.3	0.8
Montréal	3,426,400	4.3	-0.3	0.0
Ottawa–Hull	1,063,700	4.4	1.1	1.2
Kingston	146,800	1.8	-1.6	2.0
Oshawa	296,300	1.2	6.0	-0.4
Toronto	4,682,900	10.1	0.0	-0.9
Hamilton	662,400	3.7	2.5	-0.1
St. Catharines–Niagara	377,000	1.9	0.6	0.2
Kitchener	414,300	3.9	1.0	0.8
London	432,500	3.1	-1.2	1.2
Windsor	307,900	5.4	0.9	0.9
Sudbury	155,600	0.4	-4.3	-0.4
Thunder Bay	122,000	0.6	-3.8	-0.1
Winnipeg	671,300	2.5	-1.6	0.5
Regina	192,800	1.4	-3.4	0.5
Saskatoon	225,900	2.0	-2.7	2.0
Calgary	951,400	4.6	3.6	2.2
Edmonton	937,800	2.9	0.6	2.5
Abbotsford	147,400	4.0	2.8	-1.4
Vancouver	1,987,000	10.0	-0.2	-0.8
Victoria	311,900	2.3	0.0	0.8
All CMAs	19,296,900	5.6	–	0.2
Non-CMAs	10,710,100	0.8	-0.4	–
All Canada	30,007,100	3.9	–	–

a: Immigrated between 1996 and 2001.
b: CMA boundaries are held constant.
Source: Census of Canada, 2001.

Table 8.2: Recent immigrants[a] and internal migrants as a share of the population aged less than 30 years of age, 2001[b]

	Population under 30	% of 2001 population under 30		
		Recent immigrants under 30	Internal migrants under 30	
			CMAs	Non-CMAs
St. John's	69,600	0.8	-7.8	3.2
Halifax	141,900	2.5	-0.9	6.0
Saint John	47,500	1.3	-2.0	-0.5
Chicoutimi–Jonquière	57,100	0.5	-7.9	0.4
Québec	247,000	1.6	-3.8	3.1
Sherbrooke	60,000	2.9	-6.8	4.3
Trois-Rivières	47,400	0.9	-5.9	1.3
Montréal	1,295,800	5.8	0.3	1.4
Ottawa–Hull	421,700	5.7	1.6	2.9
Kingston	56,300	2.4	-5.2	3.5
Oshawa	122,500	1.5	-4.8	0.6
Toronto	1,863,200	11.9	0.8	0.0
Hamilton	253,800	5.1	1.7	0.8
St. Catharines–Niagara	134,500	2.6	-1.2	0.4
Kitchener	173,300	4.8	0.1	2.2
London	173,600	4.0	-2.1	2.8
Windsor	125,300	6.9	0.7	1.8
Sudbury	58,100	0.6	-7.7	0.4
Thunder Bay	45,200	0.8	-7.1	0.3
Winnipeg	265,600	3.4	-1.9	2.0
Regina	81,400	1.9	-3.9	2.5
Saskatoon	99,900	2.5	-3.6	4.7
Calgary	399,100	5.3	4.1	4.9
Edmonton	395,300	3.5	0.7	4.3
Abbotsford	62,500	5.0	1.5	-0.7
Vancouver	752,600	12.4	0.3	0.4
Victoria	107,200	3.6	-1.5	3.3
All CMAs	7,556,900	7.5		1.6
Non-CMAs	4,082,700	1.0	-3.0	
All Canada	11,639,600	4.9		

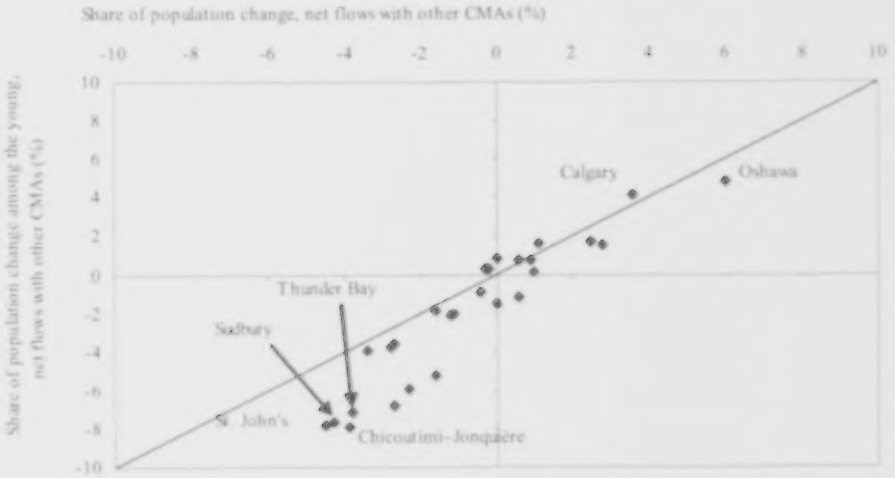
a: Immigrated between 1996 and 2001.
b: CMA boundaries are held constant.
Source: Census of Canada, 2001.

Table 8.3: Recent immigrants[a] and internal migrants as a share of university graduates[b], 2001

	Number of university graduates	% of 2001 university graduates		
		Recent immigrants university graduates[a]	Internal migrants university graduates	
			CMAs	Non-CMAs
St. John's	17,800	1.7	-4.7	0.7
Halifax	46,600	3.0	-0.5	0.0
Saint John	10,000	2.0	-1.2	1.4
Chicoutimi–Jonquière	11,200	0.7	-3.3	-1.4
Québec	79,800	2.1	-4.2	0.2
Sherbrooke	15,100	3.0	-3.7	-1.9
Trois-Rivières	11,300	0.8	-2.3	0.0
Montréal	392,100	7.6	-1.3	-0.7
Ottawa–Hull	178,000	7.1	2.0	0.5
Kingston	17,700	4.4	-0.7	0.5
Oshawa	20,300	2.4	8.2	-0.5
Toronto	684,800	16.1	0.5	-0.7
Hamilton	63,600	6.2	3.7	-0.4
St. Catharines–Niagara	27,600	4.6	1.1	-0.1
Kitchener	39,200	8.4	-0.3	0.2
London	44,000	6.4	-4.0	-0.7
Windsor	29,100	12.2	0.4	0.5
Sudbury	11,200	1.4	-6.2	-2.0
Thunder Bay	10,200	1.3	-4.0	-0.8
Winnipeg	70,700	4.1	-2.9	-0.3
Regina	18,900	2.5	-7.0	0.4
Saskatoon	23,800	4.8	-6.0	-1.2
Calgary	128,400	8.2	5.1	1.1
Edmonton	94,200	5.5	-1.6	0.7
Abbotsford	8,900	6.4	1.3	0.0
Vancouver	273,000	15.9	0.3	-3.0
Victoria	44,500	3.2	2.2	0.2
All CMAs	2,372,100	10.1		-0.4
Non-CMAs	615,400	1.8	1.4	..
All Canada	2,987,500	8.4		

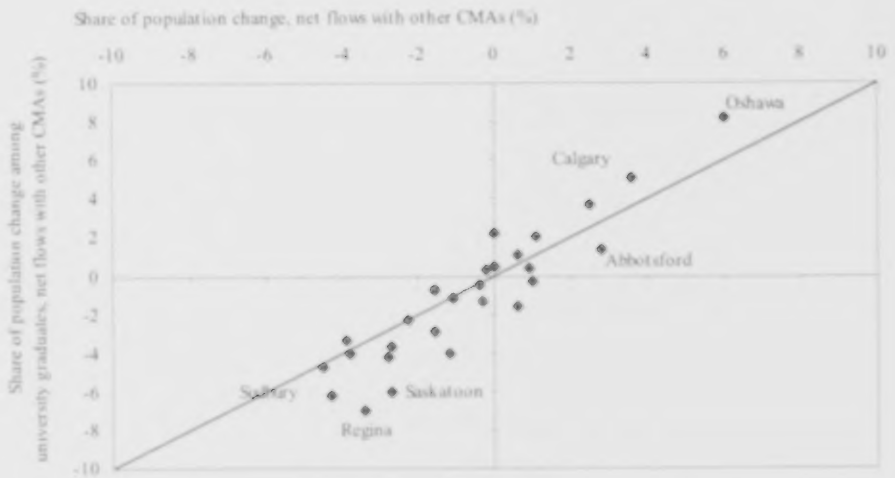
a. Immigrated between 1996 and 2001.
b. University graduates aged 30+ only.
Source: Census of Canada, 2001.

Figure 8.1: CMAs losing population to other CMAs also lost more young



Note: CMA boundaries are held constant.
Source: Census, 2001.

Figure 8.2: CMAs losing population to other CMAs lost more university graduates



Note: CMA boundaries are held constant.
Source: Census, 2001.

Chapter 9

Mobility across CMAs

Chapter 8 has shown that inter-CMA population flows accounted for a relatively large fraction of population changes in many CMAs between 1996 and 2001. This chapter provides further details about the origin of newcomers and the destination of leavers for selected CMAs.

9.1 Toronto and Vancouver lost population to nearby CMAs, but gained from smaller, distant centres

Toronto and Vancouver lost population to smaller nearby CMAs, but gained from distant centres. There were substantial gross mobility flows between other CMAs and Toronto (Figure 9.1). Altogether, about 139,000 people moved to Toronto from another CMA between 1996 and 2001, and an almost equal number moved from Toronto to another CMA. The largest flows between Toronto and other CMAs were with the nearby smaller CMAs of Hamilton and Oshawa, and with Montréal. Toronto generally maintained positive net flows with most other CMAs, gaining more than 1,000 persons from St. John's, Halifax, Québec, Ottawa–Hull, Kingston, London, Sudbury, Winnipeg, and Edmonton, and losing population only to Calgary, St. Catharines–Niagara, and Kitchener.

Vancouver (Figure 9.2) also lost population to nearby CMAs of Calgary and Abbotsford and gained population from Montréal and Winnipeg. In all, Vancouver gained 68,400 people from other CMAs and lost 71,800 to other CMAs for a small net loss of 3,400 people.

9.2 Other CMAs lost population to larger CMAs

With some exceptions, CMAs tended to gain population from nearby smaller CMAs and lose population to larger, more distant centres. Figure 9.3 shows the case for Halifax. Halifax received inflows of 17,900 persons and lost 19,100 to out migration. Halifax gained population from St. John's and Saint John, but lost population to larger CMAs of Toronto, Ottawa–Hull, and Calgary.

Similarly, Montréal (Figure 9.4) gained population from Québec, Sherbrooke, Chicoutimi–Jonquière, and Trois-Rivières, but lost population to Toronto, and also to Ottawa–Hull.

Trois-Rivières was typical of smaller Quebec CMAs, losing population to Québec and Montréal and having relatively low mobility flows to other CMAs (Figure 9.5). Winnipeg and Regina were typical of smaller western CMAs, which lost population to larger CMAs of Calgary, Vancouver, and Toronto (Figures 9.6 and 9.7).

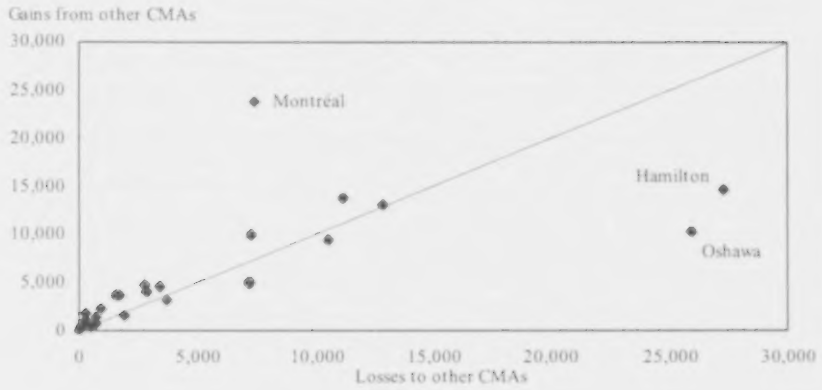
9.3 Calgary gained from nearly all CMAs

Calgary was one CMA that gained in population from nearly every other CMA (Figure 9.8). Calgary gained 6,400 people from Vancouver, 4,600 people from Winnipeg, 4,500 from Edmonton, 4,100 from Montréal, 2,900 from Regina, 2,600 from Saskatoon, and 2,300 from Toronto. In all, 72,000 people from other CMAs migrated to Calgary, compared to just 37,700 who migrated from Calgary to another CMA.

9.4 Sudbury lost population to other Ontario CMAs, while St. John's migrants moved farther afield

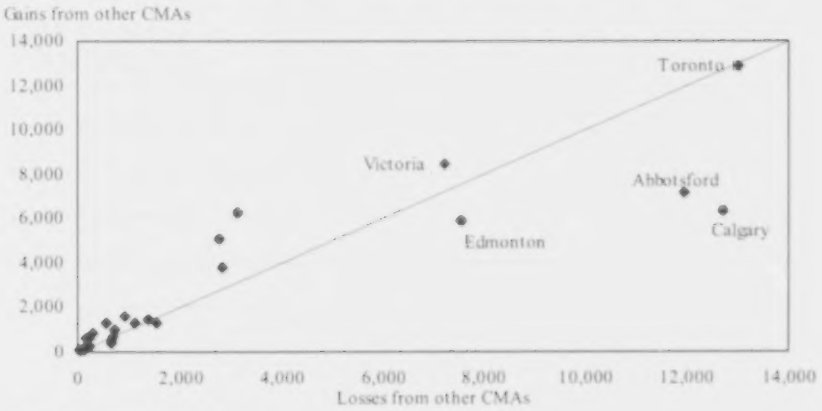
Sudbury was one CMA that lost a substantial part of its population to inter-CMA mobility. Most of this population went to one of Ontario's two largest CMAs—Toronto and Ottawa–Hull. St. John's lost about the same share of its population to other CMAs between 1996 and 2001; however, its movers went farther afield. While some movers went to Halifax, large numbers also went to Toronto, Edmonton, Ottawa–Hull, and Calgary.

Figure 9.1: Toronto lost population to nearby CMAs, 1996 to 2001



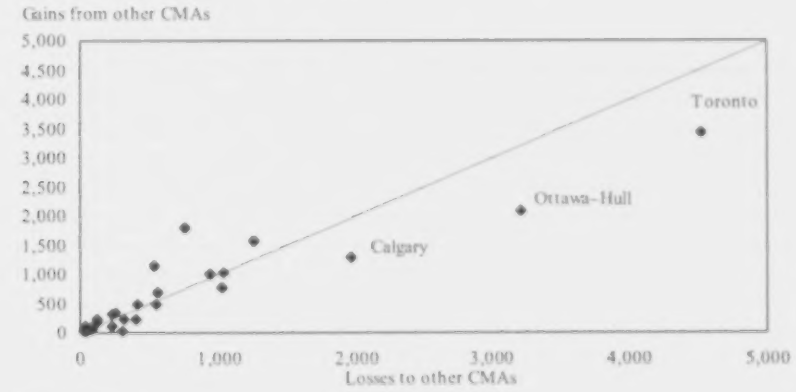
Source: Census, 2001.

Figure 9.2: Vancouver also lost population to nearby CMAs, 1996 to 2001



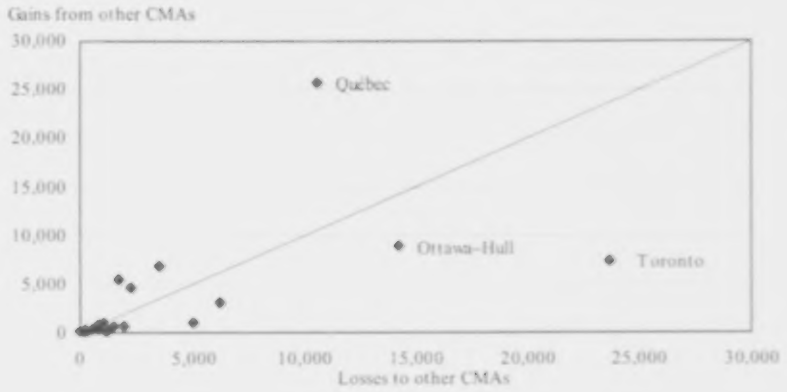
Source: Census, 2001.

Figure 9.3: Regional centres gained population from nearby smaller CMAs, but lost population to large centres: The case of Halifax, 1996 to 2001



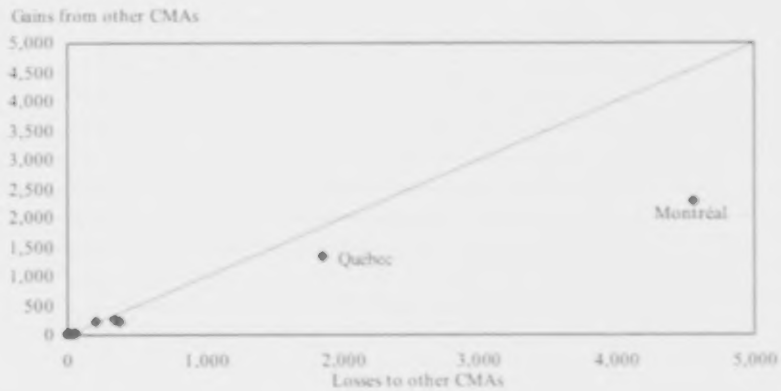
Source: Census, 2001.

Figure 9.4: Montréal gained population from nearby smaller CMAs, but lost population to other large centres, 1996 to 2001



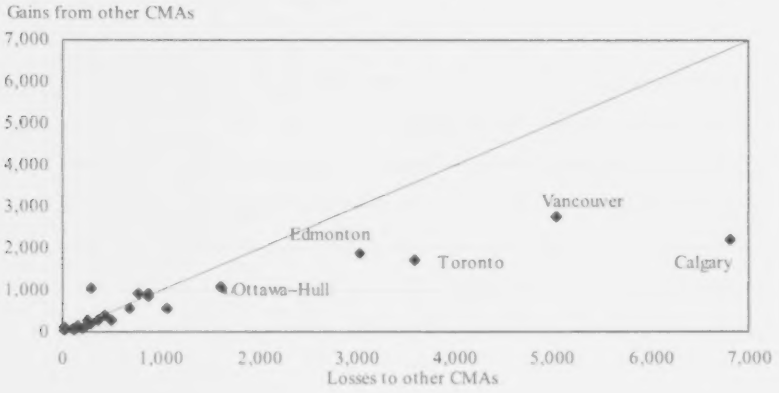
Source: Census, 2001.

Figure 9.5 : Trois-Rivières lost population to Montréal,which is typical of smaller Quebec CMAs, 1996 to 2001



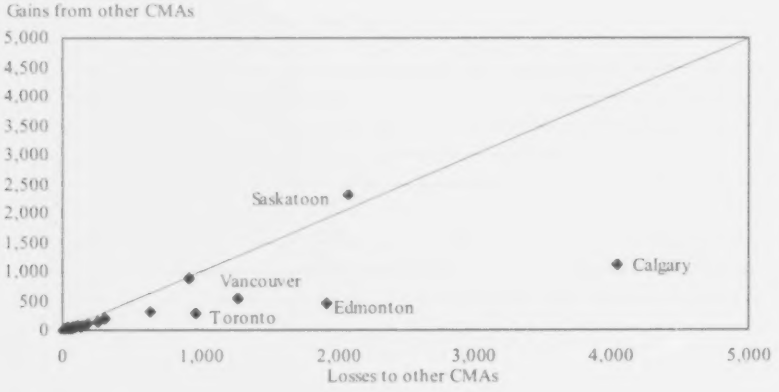
Source: Census, 2001.

Figure 9.6: Smaller CMAs in the West lost population to larger CMAs:The case of Winnipeg, 1996 to 2001



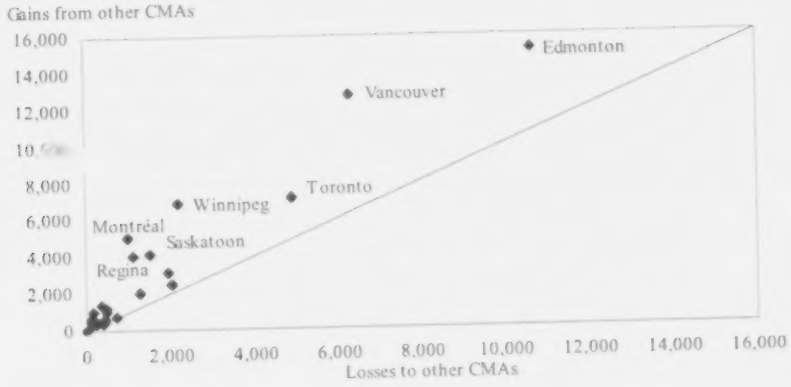
Source: Census, 2001

Figure 9.7: Smaller CMAs in the West lost population to larger CMAs: The case of Regina, 1996 to 2001



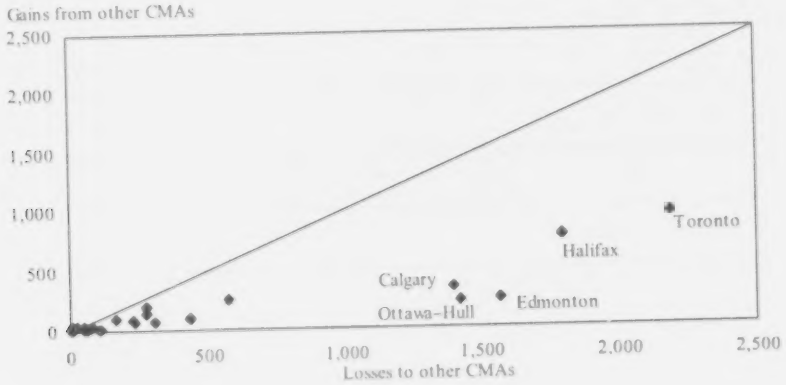
Source: Census, 2001

Figure 9.8: Calgary gained from everywhere, but especially from the West, 1996 to 2001



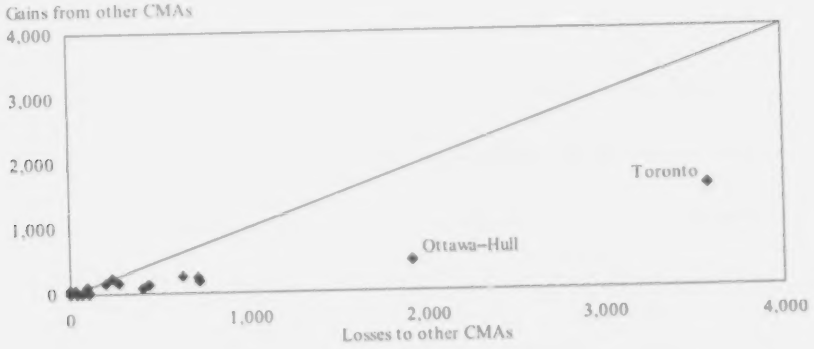
Source: Census, 2001.

Figure 9.9: St. John's lost to most major population centres in Canada, 1996 to 2001



Source: Census, 2001.

Figure 9.10: Sudbury lost to major population centres in Ontario, 1996 to 2001



Source: Census, 2001.

Conclusion

The economic landscape of Canada has changed in the face of the new global economy, and this change is reflected in Canada's cities. This report discussed numerous indicators among Census Metropolitan Areas (CMAs) under the headings of (1) Labour Markets, (2) Business Conditions, and (3) Population Growth and Mobility. The findings were varied, and readers interested in the details for particular CMAs are encouraged to probe the tables for details relevant to their own interests. However, several major trends can be identified:

- Examining years close to business cycle peaks over a 20-year period, CMAs as a group were remarkably stable in their unemployment rates, employment rates, work activity, and earnings. Furthermore, among CMAs, relative rankings of these same indicators were remarkably stable.
- CMAs typically converged (or, became more alike) in their employment and unemployment situations. Earnings was one area where the indicators did not converge across the period, but rather some lower-earning CMAs experienced declines in annual earnings. In all, these results indicate that CMAs are becoming more alike in some labour market outcomes, although large differences still prevail.
- Employment, unemployment, and earnings were redistributed to different groups of people over the 20-year period. In some cases this reflects increasing inequality in labour market outcomes.
    - Recent immigrants experienced large declines in employment rates compared to the Canadian-born.
    - High earners enjoyed increasing earnings while low earners' earnings deteriorated.
    - Women gained earnings and employment while men lost earnings and employment.
    - Young workers and low-educated workers experienced lower employment and earnings compared to their older and more educated counterparts; young workers fell behind in earnings.
- Business activity continued to shift towards services over the last 20 years. The largest changes in CMAs were a shift in employment away from manufacturing towards business services in the areas of professional, scientific, and technical services industry, and in the administrative and support, waste management, and remediation services industry.
- Manufacturing was concentrated into a few CMAs. Business services was generally much less concentrated than manufacturing into a few CMAs, suggesting that more CMAs serve to gain from the growth in this well-remunerated sector.
- Large CMAs became less diverse over the past two decades, possibly reflecting international competitive pressures forcing cities to specialize.
- The computer and telecommunications (CT) sector, a sector that combines high tech manufacturing and services activities, grew particularly fast in the 1990s and was concentrated into a few large CMAs. Some smaller CMAs nevertheless had important CT sectors relative to the size of their own economies.
- Immigration was the most important source of population growth in the country's largest CMAs. Immigrants contributed significantly to these CMAs' human-capital pools.

- Other CMAs had to rely on internal migration to fuel their expansion needs. Of these CMAs, the smallest—those below 200,000—lost population and, perhaps more important, lost disproportionately more young and highly educated population to other CMAs. These losses will detract from the capital available in these CMAs to grow in the future

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